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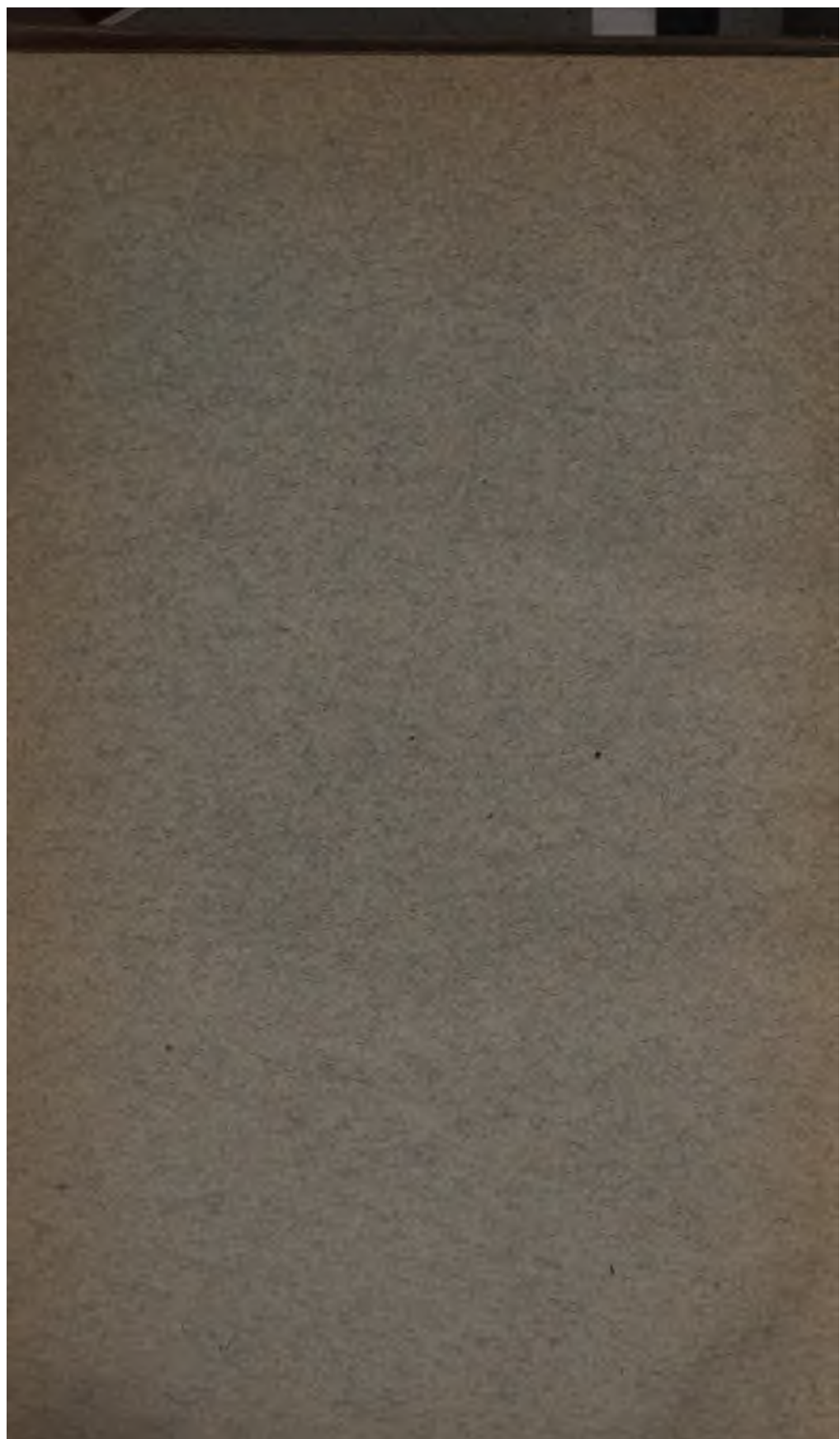
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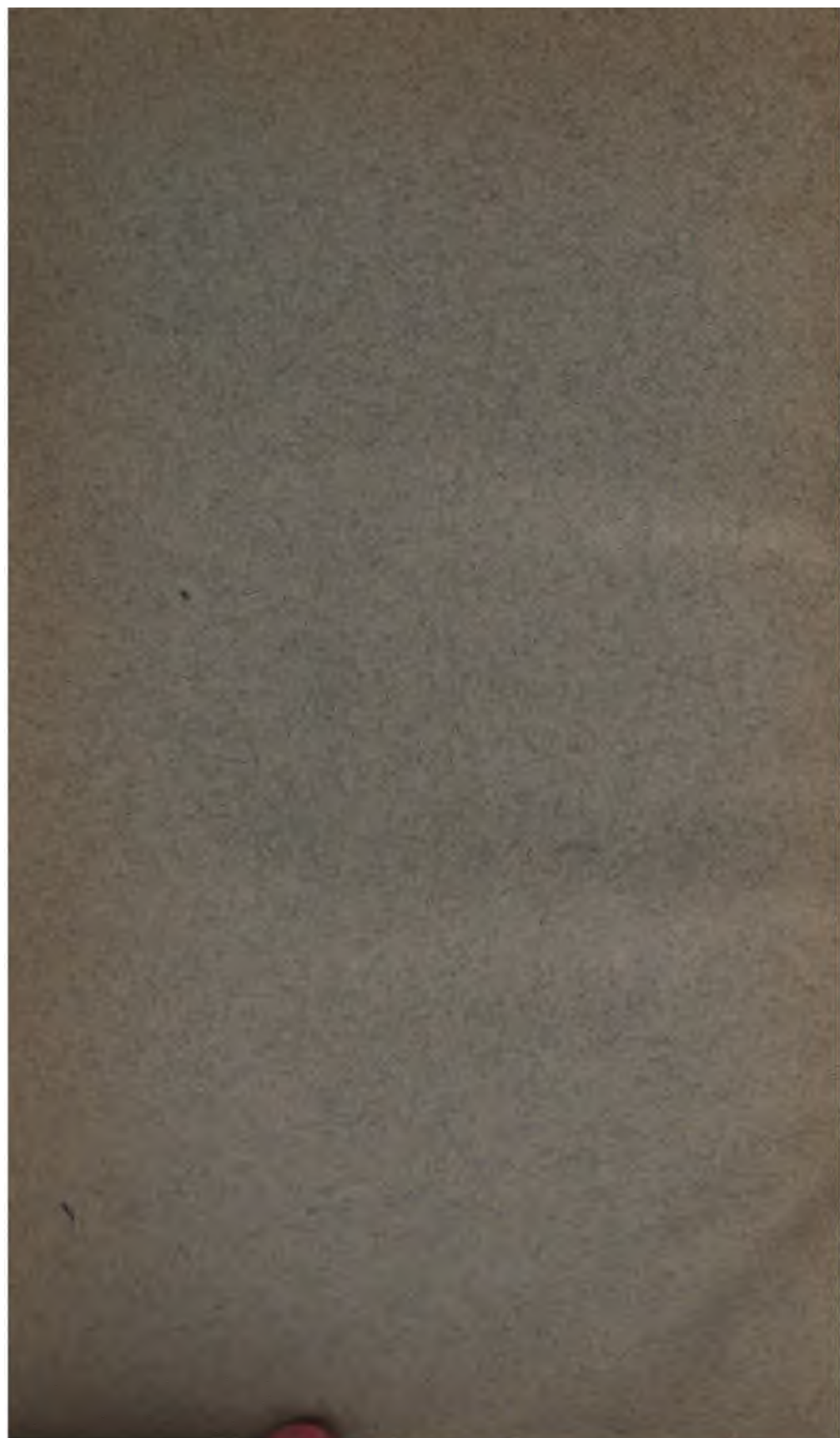


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EDUCATION DEPARTMENT.

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SPECIAL REPORTS  
ON  
EDUCATIONAL SUBJECTS,  
VOLUME 2.

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Presented to both Houses of Parliament by Command of Her Majesty.

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1898.

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[Introductory Letter to Volumes 2 and 3 of the Series.]

To Sir G. W. KEKEWICH, K.C.B.,  
Secretary of the Education Department.

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SIR,

I HAVE the honour to present to you the accompanying volumes of Reports on Educational Subjects, which form a selection from the memoranda prepared by or for the Office of Special Inquiries and Reports during 1897-98.

These volumes, like that published last year, form part of a series on the educational systems of this and other countries. In view of the interest now taken in the comparison of different methods of teaching and of different forms of school-organization, it is hoped that the following reports may be found useful by students of education.

I desire to take this opportunity of acknowledging the courtesy of the Prussian Government in acceding to a request, transmitted to them through the Foreign Office, for permission to publish a complete translation of the "Curricula and Programmes of Work for Higher Schools in Prussia," and that of the Charity Commissioners for England and Wales in contributing a paper on the system of Intermediate Education in Wales.

Thanks are also due to a number of ladies and gentlemen, in this country and abroad, for their kindness in contributing reports on various educational subjects for publication on the present occasion.

The United States Commissioner of Education and the President of Harvard University have both been so good as to promise to prepare essays on some aspects of American education, but their reports are deferred until next year owing to their having been prevented from completing their contributions in time for these volumes.

Each Report bears the name of its author, and it should be understood that only the writers are responsible for the opinions therein expressed.

I am, Sir,

Your obedient servant,

MICHAEL E. SADLER,

Director of Special Inquiries and Reports.

Education Department Library,

Cannon Row,

London, S.W.

September, 1898.

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## The Welsh Intermediate Education Act, 1889. Its Origin and Working.

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## **The Welsh Intermediate Education Act, 1889. Its Origin and Working.**

### **I.—HISTORICAL SKETCH.**

#### **(a.) EDUCATIONAL MOVEMENTS PREVIOUS TO 1880.**

1. The appointment in 1880 of a Departmental Committee to enquire into the condition of Intermediate and Higher Education in Wales, and to make recommendations for its improvement, has been generally regarded as the foundation of Welsh secondary education, and is undoubtedly the most convenient starting-point for a description in detail of the system which has since been established on lines suggested in the Committee's Report. But, in the briefest historical sketch of the movement which has led up to the present state of things, the appointment of that Committee is itself a fact requiring some explanation, for it implies that there had already arisen in Wales a strong and clearly expressed conviction that special provision for secondary education in the Principality was a matter of urgent necessity. It is the culmination of one period in the movement as well as the beginning of another.

2. The present system is not the first original contribution made by Wales to the progress of education. There are two others which deserve to be noticed, both for the light they throw upon the peculiar character of the people, and because it is possible to trace in them some characteristic features of later developments. The first of these is the system of Circulating Schools founded in 1730 by the Rev. Griffith Jones, Vicar of Llanddowror, in Carmarthenshire. These schools, as the name implies, were not fixed to one place, but moved about from place to place offering instruction for short periods to children and adults indifferently.\* In eight years the number of circulating schools in South Wales had risen to 37, and at the date of Griffith Jones's death (1761) to 218. They received considerable endowments for their support, but they were in their nature better fitted to serve as pioneers than as a permanent institution, and by the end of the century were in a languishing condition. They were closely connected in their origin and growth with the great Religious Revival of the 18th Century.

3. The Welsh Sunday Schools, though also connected with the religious movement, belong to a later stage, when the severance of a great part of the population from the Church of England

\* The practice of teaching adults and children in the same school was common in Welsh Grammar Schools until the establishment of the University Colleges, and even later.



had become an established fact. They are described by Mr. (now Lord) Lingen in his Report on the State of Education in Wales (1847), as "a mixture of worship, discussion, and elementary education, which the congregation performs for itself, and without other agency than its own." And again, "the constitution throughout is purely democratic, presenting an office and some sort of title to almost every man who is able and willing to take an active part in its administration." He further reports that in his District, including the counties of Carmarthen, Glamorgan, and Pembroke, a fifth of the entire population was returned as attending these schools, and that the voluntary teachers numbered 11,000. He sums up the movement as "exhibiting the most characteristic development of native intellect, and the efforts of the mass of a people, utterly unaided, to educate themselves upon their own model."

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4. But in spite of these two movements popular education remained in a deplorable condition until, in the middle of the present century, the public conscience was roused with a painful shock by the publication in 1847 of the above-mentioned Report of Mr. Lingen and of those of his two colleagues who had been appointed Commissioners by the Committee of Council on Education,\* to enquire into the state of education in Wales. These Reports drew a terrible picture not only of the wretched inefficiency of the elementary schools, but of the conditions of life and of the morals of the Welsh peasants and artizans. The Reports were received with many cries of pain and indignation, and fierce controversies were aroused; but whatever difference of opinion there may have been as to the justice of the indictment, there is no doubt that its severity had the inestimable result of making the education question in the widest sense a matter of national concern to Welshmen of all classes, and of giving it the high place in their thoughts and aspirations which it has ever since occupied.

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5. The next quarter of the century was marked by a steady growth of interest in secondary and higher education.† It saw the foundation (1848) by Sir Thomas Phillips of the Collegiate School at Llandovery, and (1853) of the Schools for Girls at Llandaff and Denbigh by means of the Howell Charity. Endeavours too were made, within the very narrow limits then sanctioned by law and public opinion, to put new life into the old grammar school foundations. Between the year 1850 and the passing of the Endowed Schools Act, 1869, schemes were made for seven of these foundations by the Court of Chancery, and for an equal number by the Charity Commissioners.

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6. Side by side with these partial efforts at reform came the movement for the establishment of a Welsh University. In

\* In pursuance of proceedings in the House of Commons on the motion of Mr. Williams.

† St. David's College, at Lampeter, was founded and incorporated by Royal Charter in 1827. It was empowered in 1852 to confer the Degree of B.D., and in 1865 that of B.A.

1854 the late Sir Hugh Owen proposed to a small private gathering the foundation of one or more University Colleges in the Principality, and in 1863 at a public meeting in London a Committee was formed to collect subscriptions and to take active steps to carry out the project. Their appeal met with so much support from all classes of Welshmen that in 1872 the first of the three existing University Colleges was opened at Aberystwyth. The influence of this movement on the fortunes of secondary education was indirectly very great. Even before the opening of the University College at Aberystwyth, but to an increasing extent afterwards, the promoters became convinced that in the existing condition of secondary education the success of their efforts would be marred by the inadequate means of preparation available for those who desired a University education. They grasped at an early stage the essential unity and interdependence of the great divisions, primary, secondary and higher, under which education must necessarily be treated. It is a matter of more than biographical interest that Sir Hugh Owen, who is regarded in Wales as the Founder of its earliest University College, was also chiefly responsible for the establishment of the Bangor Normal College for Elementary School Teachers in 1862, and of the North Wales Scholarship Association for linking the elementary with the secondary schools in 1879, and for the most comprehensive of the schemes for the organisation of secondary education which were submitted to the Departmental Committee in 1880-81.

7. The Endowed Schools Act, 1869, marks another important stage. It is true that, judged by statistics alone, its results in the ten years that elapsed between its passing and the appointment of the Departmental Committee were not very remarkable. The Schools Inquiry Commissioners (1867) reported that there were 24 classical and semi-classical endowed schools in Wales and Monmouthshire, educating together 961 boys, while the Departmental Committee (1881) found 27 schools with 1,540 boys. But with regard to these figures it may be remarked that, owing to the improvement in the elementary schools, the grammar schools were at the later date relieved of the considerable element which in the earlier period never got beyond the stage of primary instruction, so that the increase in the number receiving a secondary education was really larger than the figures would seem to indicate. Apart from the increase of scholars, however, the Act had valuable results in more than one direction. It laid down principles for dealing with endowments which, with changes of procedure, are in substance those which governed the framing of schemes under the Welsh Intermediate Education Act. The Act of 1869, or the schemes made under it, raised the standard of education by encouraging a wider curriculum, with more attention to modern subjects. Local interest in the schools was quickened by the introduction of a representative element into Governing Bodies; and the beginning was made of a connection between the primary and secondary schools by means of entrancer scholarships. Thirteen grammar schools were at the time of th

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Committee's Report regulated by schemes made under The Endowed Schools Acts, and considerable progress had been made in other cases.

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Committee,  
1880.

8. Meanwhile the passing of the Reform Bill of 1868 had produced a great increase of political activity in the Principality. New aspirations and demands for special treatment began to be formulated in the native Press and on local platforms, and to receive constant and well-organised advocacy in Parliament. The strength of this advocacy was greatly increased by the results of the General Election of 1880, and on the 25th of August in that year the Lord President of the Council, in fulfilment of a promise made by the Prime Minister in the House of Commons, announced the appointment of a Departmental Committee "to inquire into the present condition of Intermediate and Higher Education in Wales, and to recommend the measures which they may think advisable for improving and supplementing the provision that is now, or might be made available for such education in the Principality." The scope of the inquiry was shortly afterwards extended so as to include the County of Monmouth.

Composition  
and Report  
of the  
Committee.

(b) INQUIRY AND LEGISLATION, 1880-90.

9. The Departmental Committee was composed as follows :—

The late Lord Aberdare (Chairman),  
Viscount Emlyn (now Earl of Cawdor),  
The late Canon Robinson (then a Charity Commissioner),  
The late Mr. Henry Richards,  
Professor Rhys (now Principal of Jesus College, Oxford), and  
Mr. (now Sir) Lewis Morris.

The Committee, besides holding meetings in London, took evidence at five towns in North Wales, and at nine towns in South Wales and Monmouthshire. They were able to present a unanimous Report on the 18th August, 1881, within a year from the date of their appointment.

Endowed  
secondary  
schools in  
1881.

10. They reported that they found 27 Endowed Secondary Schools for Boys, 13 in North Wales, 11 in South Wales, and 3 in Monmouthshire, with endowments estimated to produce an aggregate yearly income of £12,788,\* of which North Wales had £4,352, South Wales £4,665, and Monmouthshire £3,771. For the education of girls there were but three Endowed Schools, viz. : those at Denbigh and Llandaff supported out of the Howell Charity which had a gross income of £6,500, and a school at Dolgelley endowed with £300 a year out of the Charity of Dr. Daniel Williams.

Their  
character.

11. In the 27 boys' schools there were 1,540 boys, of whom from 500 to 600 were learning Greek, and rather less than 500 some branch of Natural Science. Considerably more than one-third of the whole number, and more than one-half of those learning Greek and Natural Science, belonged to the schools at

\* The aggregate value of those endowments has risen considerably since this estimate was made.

Bangor, Brecon, Llandovery, and Monmouth. The accommodation in the 27 schools, though defective in quality, was said to be sufficient for 2,846 scholars. The Committee offered four reasons for the deficiency of numbers in attendance: (1) The remoteness of some of the schools from any centre of population, and the absence of suitable provision for boarders; (2) The unsuitable character of the instruction provided; (3) The imperfect estimate formed by many parents of their duty to their children in respect of education; and (4) A prejudice against the schools entertained by a large section of the people on the ground that they were Church institutions.

12. The Committee gave some striking instances of the unequal distribution of Endowed Schools in relation to population. In the county of Denbigh there were five Grammar Schools, in the county of Montgomery only one, and that one poorly endowed and inconveniently situated. Glamorgan, with a population amounting to about one-third of the whole population of Wales and Monmouthshire, possessed only three Grammar Schools, one of them being a recent foundation by scheme under the Endowed Schools Acts, while such towns as Cardiff, Merthyr, Aberdare, and Neath, and crowded districts like the Rhondda Valley had no permanent provision for secondary education. Industrial centres in other parts of the country, such as Llanelly, Newport, Pembroke Dock, and Wrexham, were no better off. Monmouthshire had a valuable endowment, but it was applied solely in Monmouth town, away from the populous and growing district of the county. There was in all parts a great dearth of endowments to assist promising scholars to pass from Secondary Schools to the University. In only three counties was there any public provision for the secondary education of girls.

Unequal distribution of endowments.

13. Proprietary Schools were found to be very rare, and were believed to exist only in the county of Glamorgan.

Proprietary and private schools.

Private Schools were comparatively numerous. Returns were received from 152, educating 4,158 children, of these 79 were boys' schools with 2,287 pupils, and 73 were girls' schools with 1,871. The education given appears to have been mainly of the so-called "commercial" type, and in many schools, especially those for girls, no foreign language appeared to be taught. The Committee considered that their information was insufficient to justify the expression of a positive opinion as to the merits of these schools, but they thought their efficiency might at least be considered doubtful on the ground (1) That the average number in boys' schools was under 29, and in girls' schools under 26, and (2) That the average tuition fee did not exceed £6.

14. The whole number of boys in the several kinds of schools embraced by the inquiry, and from which returns were received, was,—

Number of boys in secondary schools

In Endowed Grammar Schools	-	-	1,540
In Proprietary Schools	-	-	209
In Private Schools	-	-	2,287
			<hr/>
			4,036

The population of Wales and Monmouthshire, as returned by the Census of 1881, was in round numbers 1,570,000.

sons of  
Committee  
separate  
treatment of  
les.

15. The report described briefly the distinctive characteristics of Wales bearing upon its claim for special treatment in the matter of Secondary and Higher Education. It laid stress upon the "sentiment of nationality" which, in the construction of any system of education for the people, "cannot be ignored and ought not to be discouraged"; on the bi-lingual difficulty which, outside the larger towns, gave, and would for long continue to give a special character to the question of educational method in Wales; and on the existence of a religious question which had a marked bearing on the educational position of the country and had to be taken into account.

In spite of lamentable ignorance on the part of parents as to what constitutes a good education, the Committee were impressed with the strength of the desire for education among the mass of the people. "Numerous instances," they say, "which might have been almost indefinitely multiplied, of the struggles of youths, conscious at once of their ignorance and abilities, to obtain a better education were adduced before us."

They further urged the poverty of the country taken as a whole, and particularly in respect of charitable endowments, as compared with England. On that standard of comparison it was shown that Denbigh was the only county that had endowments at all adequate to its needs, and that the proportion of educational endowments of Wales to those of England might be stated approximately to be as one to three.

minen-  
sons of  
artmen-  
Commit-

16. Their recommendations with regard to intermediate or secondary education may be summarised as follows:—

- (a) The re-constitution of the endowed schools by means of existing legislative provisions, so as to ensure their usefulness and popularity.
- (b) The establishment on a strictly undenominational basis of all schools not specially protected in that respect by the provisions of the Endowed Schools Acts. This was to be effected by the adoption of the provision known as the Cowper-Temple clause, which excludes instruction in the doctrines or formalities of any church, sect, or denomination. There was added a further recommendation that no religious instruction should be given to any scholar unless the consent of the parent or guardian had been previously obtained.
- (c) Popular election, to a great extent, of governing bodies, but under such limitations as might be necessary in order to secure the variety of element essential to the constitution of an efficient governing body. The county might perhaps be taken as the administrative area in many cases, but not universally, and it was pointed out that sufficient powers existed under the Endowed Schools Acts to give effect to this plan, where desired.

- (d) Existing Grammar Schools should be made to serve their immediate neighbourhood more effectually than they had done in the past, and a tendency to use them as means to the establishment of private boarding-schools should be checked. This should be effected by (a) adapting the education to the requirements of the people; (b) providing it at a cost within their means; and (c) enlarging and improving the existing buildings, which in most cases were of the most unworthy description.
- (e) For the small number of "First Grade" Schools which would be required, a minimum yearly fee of £10 would probably be necessary. But the kind of school most needed would be one which, for a fee of about £6 a year, would provide instruction in English, Latin, Mathematics, Natural Science, and at least one modern foreign language for boys up to the age of 16 or thereabouts. New schools of this class should be provided, and some of them should give prominence to technical subjects.
- (f) Existing grammar school buildings could not be made satisfactory if their endowments were the only source from which the cost was to be met; and for this, if for no other reason, financial assistance was required, and should be afforded partly out of the rates, partly by a grant from the Consolidated Fund.
- (g) For the provision of new schools which was urgently needed, aid must be obtained from the same quarters. In some cases it might be possible to consolidate and use for this purpose endowments applied to the maintenance of Elementary Schools, but at the best these would only suffice for a few districts. As a rule, new buildings should be provided by loan to be repaid out of the rates within 50 years, and grants in aid of maintenance should be made by Parliament in the form of graduated capitation payments on the average number in attendance, to be made on the results of an annual examination.
- (h) All schools so provided or aided should be wholly undenominational, and managed by governing bodies elected mainly, though not exclusively, by the ratepayers or their representatives.
- (i) In places where a considerable industrial population existed, Advanced Elementary Schools, carefully adapted to the characteristics of the place, might also be established with advantage.
- (j) The foregoing recommendations should, generally speaking, apply to girls as well as boys, but stress was laid on the need for a re-casting of the scheme for the Howell Charity so as to secure a wider diffusion of its benefits, and a suggestion was made for the removal to Wales of the Welsh Girls' Schools at Ashford (Middlesex).



- (k) Scholarships should be provided, tenable at secondary schools and at places of higher education. The funds for this purpose should be obtained from (a) Endowments used for the maintenance of elementary schools, and (b) Endowments applicable to other charitable objects, and no longer useful in their present mode of application.

Such Endowments should be formed into a County Fund, and be administered by a County Board.

- (l) Some organised machinery should be provided for the periodical inspection and supervision of the schools, and for an independent examination, to the benefits of which private schools also might be admitted.

The Committee made further recommendations for the establishment of state-aided University Colleges, and for the granting of Degrees in connection therewith.

Efforts to  
obtain  
legislation,  
1881-1889.

17. The Report was received with great favour in Wales, and, so far as higher education was concerned, produced its fruits with great rapidity. University Colleges were opened at Cardiff in 1883 and at Bangor in 1884, and, together with the already existing College at Aberystwyth, received Charters of Incorporation and a substantial Parliamentary Grant. Intermediate education moved more slowly. The late Mr. Mundella, on behalf of the Government, introduced a Bill dealing comprehensively with the subject in 1885, and in the four following years the Welsh Members kept the subject steadily before Parliament by the introduction of Bills and in other ways. A Bill thus introduced in 1889 had, however, a foundation to rest upon which had been lacking to its predecessors. The establishment of County Councils by the Local Government Act of 1888 removed some of the principal difficulties in the way of the measure. It provided a popularly elected Body to decide whether or not a County rate should be levied for a purpose up to that time beyond the sphere of Local Government, and it made easy the constitution of governing bodies on which the ratepayers would be adequately represented without recourse to the method of direct election, which had been opposed by many as unsuited to the case.

Welsh Inter-  
mediate Edu-  
cation Act,  
1889.

18. The effect of the altered circumstances upon public opinion was so marked that the Bill of 1889 was adopted by the Government of the day, and, after undergoing extensive amendment at their hands, received the Royal Assent on the 12th August in that year.

Local  
Authority  
constituted.

19. The purpose of the Welsh Intermediate Education Act, 1889, is declared to be the making of further provision for the intermediate and technical education of the inhabitants of Wales and the County of Monmouth. For this purpose the Act constitutes for each County and County Borough a local authority called the Joint Education Committee of the County Council, and consisting of five persons, three of whom are to be

nominated by the County (or County Borough) Council, and two by the Lord President of Her Majesty's Privy Council. Nominees of the County Council are not required to be members of that Body. Nominees of the Lord President are required to be "persons well acquainted with the conditions of Wales and the wants of the people," preference being given to residents within the County for which the Committee is appointed. The Joint Education Committee has the duty of reporting to the County Council, but its acts and proceedings are not required to be submitted to that Body for approval.

The Charity Commissioners have the right to be represented at any meeting of a Joint Education Committee by an Assistant Commissioner, who is at liberty to take part in the proceedings, but not to vote.

20. It is the duty of the Joint Education Committee to submit to the Charity Commissioners a scheme or schemes for the intermediate and technical education\* of the inhabitants of the county exclusively, or with the inhabitants of adjoining counties, and to specify in each scheme the educational endowments within their county which, in their opinion, ought to be used for the purpose of the scheme. They may, on the recommendation of the County Council, insert in the scheme provision for a payment for the purposes of the scheme out of the county rate to an amount not exceeding  $\frac{1}{4}d.$  in the £; and a scheme may be made dealing with funds derived both from the rates and from charitable endowments, or from only one of these sources, but in any scheme by which money from the rates is to be applied in the establishment or maintenance of a school, or of scholarships attached thereto, the County Council must be adequately represented on the Governing Body.

Duty of Local Authority.

Rate aid.

21. Aid from the rates is to be met by a Parliamentary Grant, which must not exceed the amount payable out of the rates, but which is otherwise determined by the efficiency of the Schools, as ascertained by such annual inspection and report as may be required by regulations from time to time to be made for that purpose by the Treasury.†

Treasury grant.

22. The endowments within the jurisdiction of a Joint Education Committee are, broadly speaking, the educational endowments applied within the County of the Committee, with certain exceptions as provided by the Endowed Schools Acts, but including a considerable class of endowments connected with elementary schools which are excepted from the jurisdiction

Endowments.

\* Intermediate education is defined as a course of education which does not consist chiefly of elementary instruction in reading, writing, and arithmetic, but which includes instruction in Latin, Greek, the Welsh and English language and literature, modern languages, mathematics, and natural science. Technical education is defined in much the same way as it is in the Technical Instruction Act, 1889. "Intermediate" may be taken to be, for the purposes of this paper, equivalent to "Secondary."

† See Appendix A.



under those Acts in England. Where the benefits of an endowment are divisible between two or more Welsh counties, or between Welsh counties and any place outside Wales and Monmouthshire, the Charity Commissioners have to determine its apportionment.

Endowments given since the passing of the Endowed Schools Act, 1869, cannot, without the consent of the Founder or of the Governing Body, be dealt with by a scheme under the Welsh Act.

religious  
provisions.

23. The provisions with regard to the religious qualifications of Governors and Masters, to the religious education of boarders, and to the exemption of day-scholars from religious worship or lessons, are precisely the same as those required in England under the Endowed Schools Acts, 1869-74, nor is there any difference in the grounds upon which endowments may be excepted from these provisions. The Welsh Act, however, contains a provision not found in the previous Endowed Schools Acts, that every scheme which does not relate to endowments excepted as above-mentioned, must provide that no religious catechism or formulary which is distinctive of any particular denomination shall be taught to day-scholars at a school established by the scheme.

procedure.

24. The procedure to be followed in the framing of a scheme is as follows:—The Joint Education Committee submit to the Charity Commissioners either a scheme, or proposals for a scheme to be formally drafted by the Commissioners. The latter may, if they think fit, accept a joint scheme from two or more Joint Education Committees. The Commissioners, if they approve the scheme either without modifications or with such modifications as may be assented to by the Joint Education Committee, adopt it and proceed with it as with one of their ordinary schemes under the Endowed Schools Acts, 1869-74.\* If the scheme is not so adopted, the Commissioners may prepare a scheme of their own, but in that case they are required, if the Joint Education Committee so desire, to submit the scheme of the Committee, together with their own, to the Education Department. For the purpose of appeal to the Queen in Council, or of petition praying that a scheme may be laid before Parliament, the County Council and the Joint Education Committee are put in the same position as the persons or bodies entitled to exercise those rights under the Endowed Schools Acts, 1869-74.

The Act is to be construed, so far as is consistent, as one with the Endowed Schools Acts (1869, 1873, 1874), and may be cited with those Acts as the Endowed Schools Acts 1869-1889, and the Charity Commissioners are required in every year to cause to be laid before both Houses of Parliament a Report on proceedings under the Act.

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\* A detailed description of the procedure under these Acts will be found in the Report of the Royal Commission on Secondary Education in England (1895) Vol. I., p. 21, para. 5.

25. The powers conferred by this Act on the Joint Education Committees were limited in the first instance to a period of three years, during which time the powers of the Charity Commissioners to frame schemes, except as provided by the Act, for educational endowments in Wales and Monmouthshire, were suspended unless the consent of the Education Department to their exercise were obtained. The powers of the Committees, which would thus have expired in 1892, have been extended from year to year by the Expiring Laws Continuance Act, and are now secured to them up to the 31st December 1898.

Temporary nature of the Act.

26. It will be noticed that the Charity Commissioners are entrusted with the general control of the machinery provided for the establishment of the new system, but it needs to be pointed out that this temporary function involves a permanent one of considerable importance. For the effect of incorporating the Welsh Act with the Endowed Schools Acts is to give to all funds included in the Scheme on the recommendation of a County Council the character of permanent Charitable Endowment, and to bring these new funds, as well as those derived from ordinary endowments, under the permanent jurisdiction exercised by the Charity Commissioners under the Charitable Trusts Acts.

Relation of Charity Commissioners to the Act.

27. The Welsh Intermediate Education Act, which embodied, or provided the means of carrying out, all the more important Recommendations of the Departmental Committee with regard to Secondary Education, came into operation on the 1st November 1889. But before its working is described, it will be convenient to note here the passing of two other Acts of Parliament which have had a direct influence on Welsh secondary education. (1) The Technical Instruction Act, which was passed in the same Session, applied to Wales and Monmouthshire as well as to England, and gave to County Councils, County Borough Councils, and Urban Sanitary Authorities, the power to levy a rate of 1*d.* in the £, or twice the amount that could be raised under the Welsh Intermediate Education Act. (2) The Local Taxation (Customs and Excise) Act, 1890, by which certain imperial funds were made available for educational purposes at the discretion of County Councils, provided that in Wales and Monmouthshire these funds, if devoted to education, might be applied under either the Technical Instruction Act or the Welsh Intermediate Education Act, as the County Council might prefer. Without the aid afforded from this source, the Welsh system of secondary schools would have been very far from the degree of completeness which it has now attained.

Technical Instruction Act, 1889.

Local Taxation Act, 1890.

## II.—ORGANIZATION, 1890-94.

28. There would have been little ground for surprise or disappointment if, in a poor agricultural country such as the greater part of Wales is, and in a period of agricultural depression,

Prompt adoption of the Welsh Act.

a system which depended on the willingness of the ratepayers to add to their existing burdens, had come only slowly and partially into operation. The Act was, however, adopted by every County and County Borough, and with little if any sign of hesitation or reluctance. In four counties the Joint Education Committees were actually at work within the first two months, and in six months from the date at which the Act came into operation considerable progress had been made in every county.

Procedure of  
Joint Education  
Committees.

29. The Joint Education Committees (of which there are in all 16, including three for the County Boroughs of Cardiff, Newport and Swansea) had, in the first place, to inform themselves of the requirements and wishes of the inhabitants within their respective areas. This information was obtained (*a*) by the issue of printed Questions addressed to the various public bodies, educational and administrative, within the County, (*b*) by the reception of deputations from localities where a school was desired, and (*c*) by the holding of Public Inquiries in the principal towns in the County. The last-named method, and to a less extent the plan of receiving deputations, not only elicited useful information, but had an educative effect of no little value. Questions were raised and discussion was encouraged with regard to educational aims and principles, as well as to local claims, and those who took part in the proceedings, and the still larger number that came to listen, gained a more distinct notion of what the Act was to do for them, and of their own duties and responsibilities, than could have been given them in any other way.

Charity  
Commissioners repre-  
sented on  
Joint  
Education  
Committees.

30. Under a provision of the Act which has already been mentioned, the Charity Commissioners were represented at all, or nearly all, the meetings of the Joint Education Committees by one of their Assistant Commissioners. It was the duty of this Officer to give the Committees information as to the endowments within their respective areas and jurisdiction, and to put before them the principal considerations, whether of law or of policy, which would have to be taken into account in connection with proposals for including any given endowment in a scheme. It was further his duty to keep before their minds the conclusions upon questions of educational organization and policy to which the Commissioners had been led by a long and extensive experience, but in so doing to recognise that the Committees were dealing with public funds far exceeding in amount all the available Charitable Endowments, and that this fact alone might justify them in trying experiments which the Commissioners would not themselves have tried, or have allowed others to try, at the expense of Charitable Endowments alone. This opportunity for personal communication with the Committees was, in the opinion of the Charity Commissioners, a valuable feature of the Act, while each Committee, besides the advantage of immediate reference to official experience at the moment it was wanted, obtained from the Assistant Commissioner the latest intelligence of the methods and progress of the Committees in other Counties.



31. The latter object, however, so far as general principles were concerned, was attained more effectually by a series of Conferences of Joint Education Committees held while the schemes for the several Counties were in course of preparation. The first three of these included only the six Counties of North Wales, and were presided over by Mr. Arthur Acland, M.P., Chairman of the Joint Education Committee of Carnarvonshire. A single Conference was also held by the Committees of Glamorgan, Monmouthshire, Cardiff, and Swansea. These were quickly followed by five Conferences of all the 16 Committees held under the Chairmanship of Mr. Acland between September 1890 and January 1892, and by two subsequent Conferences presided over by Mr. Humphreys Owen, M.P., at which the business was of a more special nature.

General  
conferences  
of Joint  
Education  
Committees.

32. The proceedings of these Conferences, to the usefulness of which the Charity Commissioners have more than once borne testimony, were printed *verbatim* and published. The influence of the men best qualified to speak upon educational matters was thus brought to bear upon the whole country, difficult problems were investigated and discussed with freedom from the restraints often imposed by local prejudice, and with the advantage of having a considerable variety of experience brought to bear upon them, and a general uniformity of principle and plan insinuated itself by these means into the several Schemes. For the Conferences confined themselves strictly to interchange of opinions and suggestions, and carefully avoided all appearance of seeking to impose their decisions upon the Committees, or of claiming any special authority for them.

Value of the  
Conferences.

33. Among the principal subjects discussed were, the treatment of endowments to the benefits of which the whole or large portions of the country were entitled, the constitution, functions, and administrative area of governing Bodies, the appointment and dismissal of Assistant Teachers, the treatment of thinly populated rural districts, the education of girls, co-education of boys and girls, tuition fees, religious instruction, the teaching of Welsh, Manual instruction, and finally the establishment of a Welsh Central Board for the examination and inspection of schools, to which further reference will be made.

Topics dis-  
cussed.

34. Owing to the influences which have been described the organization is in its main features the same in every County, and is embodied in each case in a single Scheme. The educational resources of the County available for the purposes of the Scheme are treated as one fund, and are administered by a County Governing Body. The County is divided into districts, called "school districts" in cases where a County school is to be established, and "scholarship districts" in other cases. Each district has its own Governing Body, which is also as a rule the Governing Body of any County school or schools within the district. The districts are formed with general reference to the natural grouping of parishes round existing schools or round

Organization  
of County by  
districts.

convenient centres for new schools. It was generally accepted that the minimum population of a school district should be about 8,000, but in thickly populated Counties like Glamorgan and Monmouth a district not infrequently contains more than five times that number. In a few cases where the number is at or below the minimum a probationary period is fixed during which the experiment of conducting a school may be tried, and a certain discretion is given to the County Governing Body at the end of the period to make the school permanent or to convert the district into a scholarship district.

scholarship  
districts.

35. A scholarship district is constituted where a group of parishes is too small to support a school of its own, and too remote from any County school to be able to get its fair proportion of advantage therefrom without special expense and difficulty. In such a case it was thought wise to give the district its own share of the County Fund, and to provide for the application of the money in the maintenance of scholarships tenable at any County school, or in the maintenance of an upper department in connection with some Public Elementary School in the district. It may be useful to give here some examples of the division of Counties upon these principles:—

examples.

#### DENBIGHSHIRE, POPULATION (1881) 113,330.

School Districts.	Population.	Scholarship Districts.	Population.
Llangollen ...	10,287 ...	Cerrig-y-Druidion ...	2,516
Ruthin ...	12,139 ...	Llansilin ...	3,917
Denbigh ...	12,949 ...	— ...	—
Llanrwst ...	9,108 ...	— ...	—
Ruabon ...	15,722 ...	— ...	—
Wrexham ...	37,986 ...	— ...	—
Abergele ...	8,715 ...	— ...	—

There were ancient foundations at Ruthin, Denbigh, Llanrwst (which also served a considerable district of Carnarvonshire) and Ruabon. Provision was made that a probationary period might be fixed in the case of Abergele, if desired.

#### MERIONETHSHIRE, POPULATION 51,967.

School Districts.	Population.
Bala ... ..	12,292
Dolgelley ... ..	7,277
Towyn ... ..	8,131
Barmouth ... ..	5,394
Festiniog ... ..	18,873

There were ancient foundations at Bala and Dolgelley. The establishment of Barmouth School is subject to a period of probation.

**\*GLAMORGANSHIRE, POPULATION 462,964.**

School Districts.					Population.
Llandaff and Penarth	...	..	...	...	24,941
Barry	...	...	...	...	18,957
Cowbridge...	...	...	...	...	7,630
Bridgend	...	...	...	...	44,176
Port Talbot	...	...	...	...	22,615
Neath	...	...	...	...	40,249
Gowerton	...	...	...	...	32,495
Ystalyfera	...	...	...	...	17,374
Aberdare	...	...	...	...	51,972
Merthyr	...	...	...	...	58,080
Gelligaer	...	...	...	...	12,754
Pontypridd	...	...	...	...	42,371
Porth	...	...	...	...	88,350

There were existing endowed schools at Llandaff, Cowbridge, and Gelligaer.

36. The County Fund comprises :—

The County fund: its ap- propriation.

- (a) The amount payable by the County Council out of the rate authorised by the Act.
- (b) The amount payable by the County Council by way of grant under the Local Taxation (Custom and Excise) Act, 1890.
- (c) The Treasury Grant.
- (d) Endowments, the administration of which is vested by the County Scheme in the County Governing Body.
- (e) Additional donations or endowments which may be received by the County Governing Body after the date of the Scheme.

This fund† is charged in the first place with a sum not exceeding one-fifth (the maximum is lower in one or two cases) to be applied yearly by the County Governing Body to meet expenses incurred under the following heads :—(a) Management of property and business ; (b) Examination and inspection of County Schools ; (c) Travelling Teachers ; (d) County Exhibitions ; and (e) Teachers' Pension Fund.

The residue is, as a rule, divisible among the School and Scholarship Districts in stated proportions, which were determined by population and rateable value, modified occasionally by peculiar local circumstances. In one or two cases the residue is allocated by two steps, a fixed sum being first given to each district, and the ultimate residue being distributed on the basis of population, or more or less at the discretion of the County Governing Body.

\* Exclusive of the County Boroughs of Cardiff and Swansea.

† Generally speaking, but in many cases there are special provisions for the application of that part of it which comes from Charitable Endowments.



The payments thus made by the County Governors to the District Managers are, in School Districts, subject to the condition that one-fifth shall be set apart for Scholarships and Bursaries, the remainder being applicable for the general maintenance of the school.

The County  
governing  
body.

37. The County Governing Bodies vary in size, the smallest containing 15 members and the largest 33, the average being about 23. In every case a majority of the Body is appointed by the County Council, and in every case at least one Governor is appointed by a Welsh University College. The remainder are appointed by the District Governing Bodies, by co-optation, and in some cases by the Head Teachers of Public Elementary Schools in the County. Each County Borough is represented on the Governing Body of the County in which it geographically lies, and gives to the County an equivalent representation on its own Governing Body. In each of the three County Boroughs there is also provision for the representation of the School Board, and in two out of the three for representation of duly constituted Managers of Public Elementary Schools not provided by School Boards.

The District  
governing  
body.

38. The District Governing Body, where there is a school, varies in number from 11 to 21, and in Scholarship Districts is usually below the former figure. Its constitution varies also very considerably in different localities, but it contains in all cases representatives of the County Council, of Urban and Rural Local Authorities in the District, and of the Elementary Education Authorities (School Boards and Managers). Parents of Scholars, Donors and Subscribers are also provided for in some cases. With but very few exceptions, the election of a minimum number of women is secured on the Governing Body of every District in which there is to be a school.

Among the provisions applicable to Governing Bodies, both of Counties and of Districts, it may be noted that any Governor may be a woman, that no person elected need be a member of the electing body, and that the general term of office is either three years for all Governors, or three years for those representing publicly elected bodies and five years for others.

Distribution  
of functions.

39. Broadly speaking, the District Governing Body is responsible for local finance and the ordinary management of school affairs, and administers the Scholarship Fund of the District, while the County Governing Body has a general control of the County organization, partly through its position as receiver and distributor of the County fund, and partly by virtue of special functions which affect all the County schools, or the exercise of which could, it was thought, be entrusted with more advantage to a Body which has a wider area of observation and experience than is afforded by a single school. Among such functions are the arrangements for the examination and inspection of schools in concert with the Central Welsh Board, for travelling teachers in special subjects, and for exhibitions to take pupils from the

schools to places of higher education ; the organization of a Pension Fund for Teachers ; and the framing of general regulations for the guidance of District Bodies in the administration of the district Scholarship funds. The County Governing Body has also the important function of making arrangements with the Governing Body of any other County for the benefit of scholars on the borders or otherwise.

40. There are, however, two or three points in respect of which the County Governing Body is in almost every county directly concerned with the actual management of the several schools. These are the provision of school buildings, the extension of the school curriculum beyond the subjects named in the Scheme, and the appointment and dismissal of the head master or head mistress. With regard to these points, which will be further noticed in detail, there was a fairly unanimous feeling on the part of the Joint Education Committees that many of the districts would be too small to provide Governing Bodies with sufficient experience to ensure the maintenance of a high educational standard, and that a County Body would not be subject to the danger of undue pressure from local influences, and would be able also to work for a differentiation of the several schools under their control, and so save them from the evils which attend isolated efforts and haphazard aims.

41. This multiplicity of governing bodies, with its system of dual control, was not adopted without misgivings. By some it was thought that in most of the counties the County Body would have sufficed for the management of the schools ; and indeed in the smallest county, Radnorshire, that plan has been adopted, though even there District Governors have been created for other purposes. Others feared that the functions reserved for the District Governors would be too insignificant to make service on those bodies attractive to the best people. In Glamorgan, where the districts have in several cases a population larger than that of some Welsh counties, it was felt that the reason for limiting the powers of the District Governors had not the same force as elsewhere, and the appointment and dismissal of head master and head mistress accordingly rest with them. But on the whole the democratic instinct, the desire to enlist for the work the largest possible number\* of workers which is characteristic of the people,† prevailed over these objections, and it must be admitted that the system adopted has so far produced less friction than might have been anticipated.

42. The appointment and dismissal of head masters and head mistresses are in three counties absolutely in the hands of the District Governing Body, and in two others of the County Governing Body. In the remaining eight counties the County

\* The number of members of Governing Bodies for the management of Public Secondary Schools in Wales and Monmouthshire is equivalent to about 1 per 1,000 of the population.

† See paragraph 3 above.



Governors exercise these functions either in co-operation with a limited number of the governors of the school concerned, or, as is more commonly the case, after consideration of a report from a Committee on which the County and District Body are represented in the proportion respectively of five to three. The remuneration of the head master, which comes entirely out of the District Fund, is provided for, in accordance with the practice of the Charity Commissioners, by a fixed salary, usually £150 a year, and a payment in respect of each scholar, varying in most cases from £1 to £3. Where there are boarders the profits derived from them usually go to the master.

43. In 11 out of the 16 counties and county boroughs, the head master or mistress has, in accordance with the general practice of the Charity Commissioners acting under the Endowed Schools Acts, the absolute power of appointing and dismissing the assistant staff; in one county the confirmation of the District Governors is required in both cases; in one county the appointment is in the hands of the Governors and the dismissal in that of the master subject to the approval of the Governors; and in the remaining three both functions are exercised by the Governors. In all cases the Governors are required to fix the number of the assistant staff and the aggregate amount to be set apart for their remuneration, but where the head master has the power of appointment and dismissal, absolute or conditional, he has also to fix the salary to be paid to each teacher.

44. Every scheme fixes a minimum and maximum charge for tuition, and a maximum charge for boarding. In the majority of cases the tuition fee may range from £3 to £8 a year according to the discretion of the District Governors. The maximum yearly charge for boarding is usually £40 in a master's house, or £30 in a hostel managed by the Governors. In two counties the minimum tuition fee falls to £2. In a few cases both minimum and maximum are raised for special schools intended to give a more advanced or more expensive type of education. This is the case in the three county boroughs where the minimum is £6\* and the maximum £10 to £12.

45. The minimum age for admission is usually 10, but in some cases 9. Candidates for admission are required to have passed the fifth standard (in some cases the fourth), as fixed by the Code of Minutes of the Education Department,† or an examination equivalent to that standard. In most of the schools the pupils are not allowed to remain beyond 17 years of age, the Governors having power to extend the limit to 18, or in some cases 19, on the recommendation of the head master.

\* In the case of Newport £5 for girls.

† At the time when these schemes were framed, each scholar in a Public Elementary School was individually examined. The subsequent relaxation of that rule has made the above provision somewhat unsatisfactory because there is no longer a guarantee of the actual intellectual attainments of the individual children. In some districts the difficulty is got over by H.M. Inspector kindly undertaking to examine those scholars in an Elementary School who are candidates for admission to an Intermediate School.

46. The general character of the curriculum is indicated in each scheme, but a wide discretion is left to the District Governors in selecting from the subjects mentioned, and they have power to add to them, though this may not be done in most cases without consultation with the County Governing body. The curriculum includes a list of obligatory subjects, *i.e.*, subjects in which every child who goes through an ordinary school course is expected at some time in that period to receive instruction, and a supplementary list from which additional subjects may be selected. The following specimen of a curriculum as prescribed by Scheme may be taken as fairly representative :—

Geography and History (including Scripture History);  
English Grammar, Composition, and Literature;  
Mathematics;  
Latin;  
At least one modern Foreign European Language;  
Natural Science, with special attention to the industries of the district;  
Manual instruction, either in working wood or iron, or in moulding, or in modelling in clay;  
Drawing;  
Vocal Music; and  
Drill.

For Girls :—

Natural Science and Manual Instruction as above shall not be taught unless the Local Governing Body so decide, and there shall be taught in place thereof :—  
Domestic Economy and the Laws of Health;  
Cookery; and  
Needlework.

These subjects constitute the ordinary or obligatory curriculum. Then follows the supplementary list :—

Greek;  
Welsh Grammar, Composition, and Literature;  
The Principles of Agriculture;  
Navigation;  
Shorthand;

And for Girls :—

Cutting out; and  
Laundry-work.

In the case of special schools, special subjects, *e.g.*, Greek, Metallurgy, or an extra Modern Language, find their place in the obligatory curriculum. Instrumental music is provided for in most of the Schemes, but subject to an extra fee, or to the power of the Governors to impose such conditions as they may think fit. There is a general requirement that classes in scientific and technical subjects shall in all cases be associated with sufficient experimental demonstration and practical teaching. In many cases schools are required to be so conducted as to be capable of earning grants from the Science and Art Department.



religious  
instruction  
day  
scholars.

47. With only one exception, every Scheme makes religious instruction "in accordance with the principles of the Christian Faith" an obligatory subject. So far as day-scholars are concerned it is to be given subject to the right of parents to claim exemption for their children, and subject further to the special requirement of the Welsh Intermediate Education Act that no religious catechism or religious formulary which is distinctive of any particular denomination shall be taught to day-scholars.

religious  
instruction  
boarding-  
houses.

48. The question of the religious instruction of boarders was one of peculiar difficulty. The provisions of s. 16 of the Endowed Schools Act, 1869, apply equally to Schemes made for endowments in England, and to Schemes under the Welsh Act. These provisions, in effect, leave the person in charge of the boarding-house free to make what arrangements he may think proper for religious worship and for the religious instruction of those committed to his charge. To a majority of Welsh Nonconformists this plan was unsatisfactory and distasteful. They were (rightly or wrongly) impressed with the belief that the old Welsh boarding-schools, which had always been in the hands of Churchmen, had lent themselves to proselytising purposes, and they feared that what they suspected to have happened in the past might be repeated in the future. They feared, further, that the possession of such powers by a master would, where boarders were allowed, cause his appointment to be influenced by sectarian considerations, and in pressing this argument they undoubtedly had before them, not solely, or even principally, their common antagonism to the Established Church, but the unfortunate effect produced in other departments of local government by rivalries among the various Nonconformist Bodies themselves. Nor was this dissatisfaction confined to Nonconformists. Not a few Churchmen held the view that, in schools which would be under the control of Governing Bodies on which Churchmen were likely to be in a minority, it was necessary to provide more satisfactory safeguards for children of their denomination than are secured for the minority by an ordinary Scheme under the Endowed Schools Acts in England. So prevalent were these feelings, that 11 out of the 16 Schemes contain provisions affecting the religious instruction of boarders in addition to those required by Statute. In a few cases the new provisions gave rise to a considerable amount of controversy, and were, in the case of three counties, finally brought before Parliament, with the result that some of the more severe restrictions upon the discretionary powers of persons in charge of boarding houses were struck out. The Schemes thus amended by the action of the House of Lords still retain the following regulations in addition and subject to the Statutory provisions required to be inserted in all Schemes made under the Endowed Schools Acts for schools, whether in England or in Wales:—

"In a hostel or boarding-house of the school, scholars shall be allowed to attend such places of worship, and to have reasonable facilities for religious instruction from such religious teachers as their parents may choose for them.

“Christian family worship shall be held daily in the hostel or boarding-house.”

In two or three Schemes which were established without being laid before Parliament, the following provisions of a novel character are to be found :—

“Christian family worship shall be held daily in the house, but in the family worship so held the formularies of any particular denomination shall not be used.

“In the course of any general Christian religious teaching given in the hostel or boarding-house, the formularies of any particular denomination shall not be used, nor shall the distinctive tenets of any particular denomination be taught; provided that the person in charge of a boarding-house, if he so chooses, may separately from such general religious teaching (if any) give, either by himself or by deputy, religious instruction of a denominational character, but only to those scholars whose parents have, in writing, expressed a wish for such instruction.”

It is necessary, perhaps, to point out that, whatever may be the regulations for the religious instruction of boarders in any of the Schemes, those regulations are confined to boarding-houses or hostels which are under the management of the Governors or of members of the school staff. All the schemes alike contemplate the licensing of lodgings which may be private boarding-houses or hostels to be conducted on denominational principles. Pupils attending the schools from such institutions would be treated as day-scholars.

49. Fairly liberal treatment is extended to girls in every county, the minimum of accommodation to be provided for them being, roughly, in the proportion of three girls to five boys. In the three county boroughs, and in the more important places elsewhere, separate girls' schools were thought desirable, but in the bulk of the school districts it soon became apparent that the girls would fare badly unless some more economical method could be devised. Accordingly, on that ground, and in response to general expressions of opinion that under proper regulation the co-education of boys and girls was educationally and socially desirable, it was decided that the plan of “Dual” or “Mixed” schools should be adopted as a general rule. The “Dual” system, which is the prevalent one, consists in the maintenance of separate departments for boys and girls, with separate entrances, playgrounds, and class-rooms, but with a common staff of teachers, and under the control of a single head master or head mistress. The Governors have in every case power to make arrangements for boys and girls being taught together in all or any of the classes. In a “Mixed” school boys and girls may be classified and taught together without reference to sex. The immediate establishment of mixed schools is only provided for in thinly populated districts, in which there was little or no prospect of the number of boys or girls separately being sufficient to justify the establishment of a school at all, and in which the greatest

Provision  
for girls.



care had been exercised to prepare the public mind and to ascertain that the plan would be supported by public opinion. It is, however, to be observed that, if experience and the state of public opinion encourage it, there is nothing to prevent the practical merger of the Dual in the Mixed system.

school  
buildings.

50. So many new schools were required, and the existing school buildings were in so many cases unsatisfactory, that the provision of buildings was a matter of the first importance in every county, and the question of ways and means was one of no little difficulty. The revenue of the County Fund was not expected to be more than sufficient for the ordinary working expenses, and it seemed undesirable to charge it at the outset with heavy liabilities in respect of loans. The decision was promptly taken to make the establishment of schools to some extent dependent upon local voluntary effort to provide the necessary funds for sites and buildings. Fortunately, however, the passing of the Local Taxation (Customs and Excise) Act of 1890 opened up another source from which funds in aid of building could be drawn without trenching upon income. The Rate and Treasury Grant under the Welsh Intermediate Education Act, and the endowments to be included in Schemes, were not available until those Schemes had been established, but grants under the Local Taxation Act could be, and were, made at once, and were consequently accumulating during the time required for the establishment of the Schemes. The fund so formed — three or four years' grant with interest — was generally set apart as a County Building Fund, from which grants were to be made on conditions laid down by the Schemes. These conditions were in most cases as follows:—

Grants from the County Governing Body of a specified amount were to be payable to the local Governors, if, and when, within three years from the date of the Scheme, there had been provided (*a*) a piece of freehold land suitable for the requisite school buildings,\* and (*b*) a specified sum of money either actually paid or properly guaranteed. The proportion that the voluntary contributions are to bear to the county grant varies in different Schemes. It ranges from about one-third to something more than one-half of the estimated cost of building for the minimum number of pupils fixed by the Scheme. If at the end of the three years these conditions have not been fulfilled the local Governors lose their title to the grant, and the County Building Fund so set free is invested and treated as part of the County Fund. The County Governing Body has, however, the power in such cases to make other provision, with the sanction of the Charity Commissioners, for the erection of school buildings. The arrangement in detail for the provision of buildings is a function of the Local Governors, but

\* In several Schemes therein is further required a playground of not less than two acres freehold, or leased for not less than three years.

plans and financial arrangements require the sanction of the Charity Commissioners. Some account of what has actually been done in this respect will be given hereafter in this Paper.

51. There is one remarkable exception to the general rule with regard to the provision of buildings which deserves attention. In the county of Glamorgan the County Council decided to proceed at once with the erection of county schools, in places selected by the Joint Education Committee and approved by the County Council, without waiting for the establishment of the County Scheme. This was done by the County Council acting as an authority under the Technical Instruction Acts. The County Council agreed to supply a sufficient sum partly by the levy of a rate ( $\frac{1}{2}d.$  in the £) under those Acts and partly by grants under the Local Taxation Act. But here, as elsewhere, voluntary contributions were also called for and obtained. The result of this plan was that by the time the County Scheme was approved the schools were in most cases waiting ready for the pupils to walk into them, while the Governors, instead of being harassed as elsewhere by the double task of conducting schools in temporary premises and providing for the erection of permanent buildings, were free to devote themselves to their ordinary duties of administration. This, however, could only have been successfully carried out in a county where the resources were large, and the local conditions such as to remove doubt or controversy as to the best centres.

Special provision for buildings in Glamorgan.

52. It has already been stated that one-fifth of the income payable out of the County Fund to a school district is, as a rule, reserved by the Scheme for the maintenance of scholarships and bursaries. This fund is applied under the following regulations and conditions:—

Scholarships

- (a) The County Governing Body is required, after consultation with the district authority, to make regulations from time to time for advertisement, examinations, the equitable award of scholarships as between boys and girls and as between candidates speaking and not speaking Welsh, as to the particular schools, whether in the county or not, at which the scholarships shall be tenable, and as to reports on the working of the system;
- (b) The local Governors, who administer the fund, are required to maintain scholarships, tenable in the school of the district, unless otherwise ordered, not less in number than 10 per cent. nor more than 20 per cent. of the greatest number of pupils in the school in the last term of the preceding year;
- (c) A scholarship is tenable for one year, but may be renewed from year to year on the written recommendation of the head master;
- (d) Not less than one half of the scholarships are to consist of total exemption from the tuition fee, and are



restricted to children who are and have for not less than three years been scholars in a public elementary school;

- (e) The remaining scholarships are to consist of exemption from one half of the tuition fee, and to be awarded to children already in the school;
- (f) The residue of the scholarship fund is to be applied in the first place to the augmentation, where the Governors think fit, of the value of the scholarships, and secondly to the maintenance of bursaries;
- (g) A bursary is to consist of a payment to cover the expense of travelling to and from the school, and other incidental expenses of pupils from the public elementary schools.

**Bursaries.**

53. Bursaries are to be awarded to those who appear to the Governors to be most in need of them, and not on the result of an examination. They are not, therefore, as scholarships are, the reward of merit. It was intended that they should be mainly used to minimise the disadvantages of children whose homes were in the more remote parts of the school district.

**Leaving exhibitions.**

54. The maintenance and award of exhibitions to carry pupils from the county schools to places of higher education are functions of the County Governing Body. These exhibitions are to be of a minimum yearly value of £10, and to be tenable for not more than three years by boys and girls who have been not less than two years in a county school. The terms of competition are to be so arranged that the pupils in all the county schools shall in each year be enabled to compete for at least one exhibition.

**Treatment of existing Grammar schools.**

55. Among the special problems which each county had to decide for itself none presented greater difficulties than the treatment of the existing grammar schools. The difficulties were due to a variety of causes. The Act gave the Joint Education Committee jurisdiction over educational endowments applied within their county, but this definition covered boarding-schools which drew pupils from a much wider area, and were not, for general purposes, subject to any territorial limits.\* Again, where a school was, or claimed to be, giving an education suitable to boys who wished to proceed to Oxford or Cambridge, it was not easy to see how it could be made to serve this purpose, and at the same time to meet the requirements of the neighbourhood so effectually as to render unnecessary the establishment of a new school under the Act. In some cases, again, Endowed Schools were so inconveniently placed as to clash with any good Scheme of organisation based upon considerations of population and accessibility. On the other hand, the Committees, while giving due weight to these points,

\* The Welsh Act does not draw any such general distinction between "local" and "non-local" schools as that recommended in the Report of the Royal Commission on Secondary Education in England (1895).

felt it their paramount duty to make their organization cover the ground as completely and as economically as possible, and for that purpose to avail themselves of all existing materials that could be used without positive injury to the educational interests of the community. They had reason to expect that the establishment of new schools over the country would materially affect the position of all but the most important boarding-schools, and that the claims of some of these schools to give an education of the so-called "First Grade" were not sufficiently well founded to enable them to stand the competition of schools in their immediate neighbourhood supported by large public funds, even though these schools might not offer the same kind of education. On a balance of these considerations it was generally held that it would be more injurious to most of the schools to be left outside the new organization than to be taken in with some possible risk of losing a rather shadowy prestige, and it was accordingly decided, and in this the Committees had the steady support of the Charity Commissioners, to adopt the existing Grammar Schools, so far as possible, as the county schools for their respective districts. In the majority of cases the change has been of advantage to the schools from a financial point of view, and still more, perhaps, by the new vitality and energy which has come to them from contact with a popular movement. In one or two cases it has wrought some hardship, but there is reason to believe that other causes of a temporary nature have contributed to this, and that the course taken will be ultimately justified. The total number of ancient Endowed Schools thus adopted is 17.

56. The endowed Grammar Schools, however, which remain outside the County organization, are some of them of such importance as to require special notice. They include Christ's College, Brecon, the Llandoverly Collegiate School, the Grammar Schools at Abergavenny, Cowbridge, and Ruthin, and the three schools of the Jones Foundation, viz., one for boys and one for girls at Monmouth, and one for boys at Pontypool, and the Howell School for Girls at Denbigh. All of these schools are boarding-schools, and seven of them are, or claim to be, schools of the "First Grade." They are educating, in the aggregate, about 880 pupils, of whom one-half are boarders and over 700 are boys.

Endowed Grammar schools not included in schemes.

57. The grounds and circumstances of their exclusion were various. At the time of the passing of the Welsh Act the Charity Commissioners had, after long and somewhat delicate negotiations, made considerable progress with the Framing of Schemes under the Endowed Schools Acts for the schools of the Jones Foundation and for the Grammar School at Abergavenny. In order that this work might not be wasted, or endangered by delay, the Act provided that Schemes which had reached a certain stage might be proceeded with by the Commissioners in spite of the general suspension of their initiatory jurisdiction. But although the schools at Monmouth, Pontypool, and

Reasons for exclusion.



Abergavenny stand outside the county organisation for general purposes they are not wholly unrelated to it. The County Council is represented on their Governing Bodies; scholarships provided out of the County Fund for the districts in which they stand are tenable in them; and, in the case of Abergavenny, the school receives from the County Fund a direct subsidy of £100 a year. The important school at Brecon was omitted because its large boarding element and its position as a classical school of the "First Grade" made it unsuited to the requirements of the district, and because it had been, in accordance with the provisions of the Endowed Schools Acts, constituted a Church of England foundation by a Scheme made in 1880 under those Acts. Its non-local character was so marked that it was found necessary to establish at Brecon a new county school to meet the wants of the neighbourhood, and in this case it does not appear that any injurious competition or "overlapping" has resulted. The case of Llandovery was similar to that of Brecon in its main features. County scholarships are expressly made tenable at this school, and the circumstances of the district were held to be not such as to require the establishment of a new county school for boys. The Grammar Schools at Cowbridge and Ruthin were included in the Schemes for their respective counties as approved by the Charity Commissioners and by the Education Department, but were subsequently omitted in consequence of opposition raised to those Schemes in Parliament. The Scheme for the Howell School for Girls at Denbigh was also disallowed by Parliament.

Other  
Endow-  
ments.

58. The endowments included in the County Schemes were those which appeared to be important for the purpose of effective organisation. Other endowments have, in some counties, been dealt with in separate Schemes, with the object in most cases of supplementing the funds available for scholarships. But in the majority of the counties the less important endowments have been let alone, the financial and other advantages to be obtained by interference with them being generally considered incommensurate with the difficulties to be overcome.

Demand  
for Central  
Welsh  
Board of  
intermediate  
education.

59. Finally, the county organisations which have been described were completed and given a unifying principle by the establishment of a Central Welsh Board of Intermediate Education. The Scheme for this Board was the work of the Joint Education Committees in the conferences which have already been noticed, but it came before the Charity Commissioners technically in the form of identical proposals for a Scheme submitted by all the several Joint Education Committees without exception. The primary object of the Scheme based on these proposals was the constitution of a Welsh Body which would be capable of undertaking the examination and inspection required by the Treasury, and which would avert the risk, incidental to the acceptance of State aid, that a rigid Educational Code would be imposed upon the new schools by an authority unfamiliar with the peculiar local circumstances. On

the 18th June, 1891, a deputation waited upon Mr. Goschen, then Chancellor of the Exchequer, to urge, amongst other things, the adoption of some representative Welsh Body as the agent of the Treasury for these purposes. Mr. Goschen, in a sympathetic reply, pointed out that the proposal seemed to imply a large surrender of responsibility by the Treasury to a body naturally interested in the success of the schools, but he promised that the Regulations which the Treasury were required by the Act to make for the purpose of testing the efficiency of the schools should be framed in concert with the local authorities.

60. The Regulations under which the Treasury Grant is now awarded were, after communications between the Chancellor of the Exchequer and the Conference of Joint Education Committees, issued by the Treasury on the 20th June, 1892 (*see Appendix A*). The difficulty indicated by Mr. Goschen is met by the interposition of the Charity Commissioners between the Treasury and the Welsh Board. An annual examination and inspection of the schools claiming the grant is required; and such examination and inspection may be conducted by a Central Welsh Board for Intermediate Education; but the Board is to report to the Charity Commissioners, who by virtue of their ordinary jurisdiction have the necessary powers for testing the sufficiency of the Board's work or for supplementing it where necessary. The Treasury finally award their grants on the Report of the Charity Commissioners. In this way Wales obtains the freedom it desires to guide its own educational development, while the Treasury obtains, through the Government Department charged with the administration of the Act, a guarantee that the conditions of State aid imposed by Parliament are fulfilled.

The particular conditions, as defined by the Treasury Regulations, the fulfilment of which the examination and inspection are designed to ascertain, are as follows:—

- (a) The School must be efficient as regards instruction.
- (b) The School premises must be healthy and suitable for the purposes of an Intermediate School.
- (c) The School premises must provide sufficient accommodation for the scholars attending the School.
- (d) The School must be supplied with suitable furniture and apparatus.
- (e) The School must be conducted in accordance with the Scheme by which it is regulated.

If the Charity Commissioners report that any of the conditions are not satisfied the grant may be refused, or may be reduced by such number of tenths as the Treasury may determine.

61. The constitution of the Central Welsh Board, established by Scheme approved the 13th May, 1896, affords another instance of the determination of the Welsh people to give to their educational institutions a thoroughly popular character even when the subject-matter seems furthest removed from

Treasury regulations for examination and inspection.

Constitution of Central Welsh Board of intermediate education.



popular comprehension and experience.\* The Scheme establishes two Bodies, a Board consisting of 80 members, and an Executive Committee consisting of 15 members of the Board.

The Board is composed of—

- 3 *ex officio* Members (being the Principals of the three Welsh University Colleges),
- 71 Representative Members, and
- 6 Co-optative Members.

The Representative members are appointed by the County Councils, the County Governing Bodies under Schemes, Headmasters and Headmistresses of the County Schools, Certificated Teachers of Public Elementary Schools in Wales and Monmouthshire, the Councils of the three University Colleges, the Senates of the same, the Principal and Fellows of Jesus College, Oxford, and the University of Wales, with the result that—

County Councils appoint	-	-	-	-	-	21
County Governing Bodies	-	-	-	-	-	26
Headmasters and Mistresses of County Schools	-	-	-	-	-	5
Teachers of Public Elementary Schools	-	-	-	-	-	5
University Bodies	-	-	-	-	-	14

The Executive Committee is appointed by the Board. Eight members must be chosen from the representatives of County Councils and of County Governing Bodies, and the remainder from the other members of the Board.

Members of both bodies hold office for three years.

The Charity Commissioners have the right to be represented at the meetings of both bodies by an Assistant Commissioner who is at liberty to take part in the proceedings, but not to vote.

Funds administered by the Central Board.

62. The funds to be administered by the Scheme are:—

- (a) A uniform yearly contribution to be paid by the County Governing Body of each County and County Borough, being not more than 5 per cent. of its total revenue for the preceding year.
- (b) A yearly contribution by the Treasury of £500.†
- (c) Any additional donations or endowments which may hereafter be received.

The functions of the Board are declared to be:—

Functions of the Central Board.

- (a) To provide and pay for the Examination of all the County Schools, for which purpose they are to fix the percentage of income to be paid by each county, and may further charge every County Governing Body a capitation fee at the rate of not more than 2s. 6d. for each scholar offered for examination in the County Schools. It is also provided that the Examination need not be the same for all schools, but that regard shall be had by the Examiners to the teaching in each school as prescribed by the Governors.

\* The constitution of the Governing Bodies of the three University Colleges, and of the University of Wales, is even more popular in its character than that of the Central Board.

† This payment is made in recognition of the fact that the Board relieves the Treasury of the duty to provide examination and inspection,

- (b) To provide and pay for the inspection of all the County Schools, for which purpose there is to be a Chief Inspector, at a salary not exceeding £800 a year exclusive of travelling expenses, who may also be employed in the discharge of other executive functions.
- (c) The provision for Examination and Inspection may be extended to any other school in Wales regulated by scheme under the Endowed Schools Acts, 1869-1889, provided that the charge to such School shall be not less than the actual cost.

The Board may further undertake the following functions, but may not, except in payment of expenses of organisation and management, apply their income to the objects specified:—

- (a) The organisation of a Pension Scheme for Teachers in schools established by scheme under the Welsh Act.
- (b) The collection and circulation of information with regard to books, maps, and other apparatus. The Board may on certain conditions act as agents for the purchase of the same.
- (c) The arrangement of conferences of governing bodies or of teachers.
- (d) Such other functions within the scope of the Endowed School Acts as the Board think fit.

63. The Executive Committee has, in accordance with regulations to be framed by the Board,—

- (a) To make the necessary arrangements for the examination and inspection of schools.
- (b) To perform such other work as may be assigned to them by the Board.
- (c) To prepare and submit to the Board, from time to time, proposals for the extension and development of the work of the Board.
- (d) To appoint Examiners.
- (e) To appoint, and at pleasure dismiss, the Chief Inspector, Clerk, and all other officers of the Board, subject to the approval of the Board in the case of the Chief Inspector and Clerk.

Functions  
of the  
Executive  
Committee

64. The passage through the various stages prescribed by the Endowed Schools Acts of Schemes so elaborate, affecting so many local interests, and touching so many controverted points of educational and general policy, could not be very rapid. By the end of the year 1891 all but three of the Joint Education Committees had submitted Proposals for their respective County Schemes to the Charity Commissioners. By the end of the year 1893 the same number had passed out of the hands of the Commissioners into those of the Education Department. In the interval between these two stages there had taken place in each case the consideration of the Proposals by the Commissioners; the former drafting of the Scheme; its remission to the Joint Education Committee, with explanations of the modifications recommended by the Commissioners; communications

Passage of  
the scheme  
through  
the principal  
stages.



between the Commissioners and Governing Bodies of Endowments affected by the Scheme; the publication of the draft scheme for general criticism, and renewed communication with the Joint Education Committee as to the final form in which the Scheme was to be settled for submission to the Education Department. At the last-named stage the question had finally to be decided whether the Scheme was to go forward as a Scheme which had been adopted by the Commissioners, or whether the Scheme of the Joint Education Committee should be submitted as an alternative Scheme to that of the Commissioners. In seven cases out of seventeen\* an alternative Scheme was submitted; but it must not be supposed that the adoption of that course implied disagreement as to many of the provisions of the Schemes. The differences that could not be reconciled occurred, in five cases out of the seven, on quite special points, such as the insertion of a provision for the payment of the travelling expenses of County Governors, provisions affecting the religious instruction of boarders, and the age up to which scholars should be allowed to remain in the schools. In one case the number of schools proposed seemed to the Commissioners more than the financial resources could sustain; in another the Commissioners were of opinion that the maintenance of a school by two counties jointly in a border town was preferable to the establishment of two separate schools not more than seven miles apart.† In four cases out of the seven, the alternative Scheme of the Joint Education Committee was approved by the Education Department. After approval by that Department, nine out of the seventeen Schemes were, in consequence of petitions to that effect, laid before Parliament with the result that three successfully passed that ordeal, while the remaining six received amendment. In three cases the amendment took the form of excision of particular endowments, in one case of excision of the provisions for scholarships (on the ground that they prohibited the holding of scholarships at any schools but those established by Scheme under the Welsh Act), and in three cases of excision of provisions affecting the religious instruction of boarders. The first County Scheme which was established, that for Carnarvonshire, was approved by the Queen on the 16th May, 1893. The last was that for Glamorgan, which, together with the Central Board Scheme, was approved on the 13th of May, 1896.

ature of  
position  
countered  
schemes.

65. In spite of differences of opinion on what were for the most part subsidiary issues, the relations of the Charity Commissioners and the Joint Education Committees were harmonious, and the results of this experiment in the co-operation of a Central and a Local Authority for Secondary Education may be

\* *i.e.* Sixteen Schemes for counties and county boroughs, and the Central Board Scheme.

† There are only two cases of schools established and maintained jointly by two counties, *viz.*, a school at Cardigan, by the counties of Cardigan and Pembroke, and a school at Llandyssul, by the counties of Cardigan and Carmarthen.

pronounced satisfactory. With regard to the external opposition aroused by the Schemes, it is worthy of notice that, in so far as it had any general character, it was practically confined to two points—the treatment of Endowments, and Religious Instruction in Boarding Schools. In the former as in the latter case the difficulty was mainly a religious one, but in other respects the amount of friction was certainly not greater than that which has elsewhere been encountered, and must always be expected in the reformation of endowments.

### III.—THE SYSTEM AT WORK, 1894–98.

66. During the years 1894–96 the schemes for the several Counties came rapidly into operation. Governing Bodies were elected, and the provision of buildings was taken seriously in hand. Nor were the scholars neglected. In the old Endowed Schools, adopted under the Act, there was, of course, no breach of continuity; and where these existed it was possible to proceed at once to the award of scholarships and bursaries. In other cases, however, it was urged that, while sites were being conveyed and plans approved, another generation of scholars was in danger of losing the benefits of the Act, and that the opening of schools in temporary premises should be sanctioned. The chief objections to this course were the drawbacks to efficiency caused by the housing of schools in buildings not intended for educational purposes, and the fear that the concession would weaken the movement for the provision of permanent buildings by diminishing its urgency. Experience has shewn that these objections were not unreal, though they were counteracted to a great extent by the conditions on which the Charity Commissioners sanctioned the use of temporary buildings, and by the steady pressure brought to bear on the Governing Bodies through inspection, and by the fear of loss or diminution of the Treasury Grant. But the educational disadvantages, though on the whole more than counterbalanced by other considerations, have been considerable:—"Some inconvenience must inseparably attend the conduct of a County School in a disused chapel, a villa residence, or the superfluous accommodation of a town hall or public institution, however mitigated by alterations and adaptations."\* The greater number of new schools under the Act were opened under these doubtful auspices.

67. The results of the latest inspection shew that good progress has been made with the erection of schools. Out of 88 schools inspected in the year 1898, as many as 49 were housed in permanent buildings, and it is believed that, when the schools re-assemble in September, this number will be largely increased. The new schools are equipped with laboratories, and, where girls are admitted, with school-kitchens. In several cases there are also workshops. It is impossible to touch upon the supply of

\* Forty-third Report of the Charity Commissioners, para. 36.



Voluntary  
contribu-  
tions.

school buildings without noticing the remarkable way in which the community has responded to the appeal for voluntary subscriptions in support of rate-aided institutions. An aggregate sum of £76,000 has already been given or effectively guaranteed in this way. In many cases the value of a school site is included in the total, but a number of sites have been freely given in addition to that amount.

Number of  
schools and  
scholars,  
1894-98.

68. The total number of schools for which provision is made by the County Schemes is 96, of which 17 are old schools and 79 new. To these may be added the Howell girls' school at Llandaff, which, though to some extent independent of the ordinary County organisation, is required to be annually examined and inspected by the Central Welsh Board. The following table shews the rate of progress in the establishment of these schools:—

1894.			1895.			1896.			1897.			1898.		
No. of Schools.	No. of Scholars.		No. of Schools.	No. of Scholars.		No. of Schools.	No. of Scholars.		No. of Schools.	No. of Scholars.		No. of Schools.	No. of Scholars.	
	Boys.	Girls.		Boys.	Girls.		Boys.	Girls.		Boys.	Girls.		Boys.	Girls.
Boys' ..	3	300 103	10	1,164 644	15	1,913 1,484	19	3,420 3,007	20	3,679 3,198				
Girls' ..	1	..	5	..	10	..	19	..	20	..				
Dual ..	4	..	11	..	16	..	36	..	41	..				
Mixed ..	—	..	4	..	6	..	6	..	7	..				
Total..	8	493	30	1,808	47	3,397	80	6,427	88	6,877				

Proportion  
of pupils to  
population.

69. How great was the need for new schools may be judged by the fact that, in spite of the satisfactory start which has been made, the number of scholars in the 88 schools amounts only to 3.49 per 1,000 of the estimated population. If the number of scholars (883) in the principal Endowed Secondary Schools not regulated by Schemes under the Welsh Act is added, the proportion is still below four per 1,000.

Increase in  
number of  
girls.

70. The most remarkable feature of the preceding Table is the increase in the number of girls. It has already been stated that the Departmental Committee found only three Endowed Secondary Schools for girls in Wales and Monmouthshire. There are now 20 separate schools for girls, and 48 schools where provision is made for them on the Dual or Mixed system. The total number of girls in Endowed Secondary Schools in 1880 was 263; in 1898 it is 3,198 in schools regulated by Schemes under the Welsh Act, and 174 in other Endowed Secondary Schools, making a total of 3,372.

Intermediate-  
education  
fund.

71. The funds, other than the tuition fees, available under the several County Schemes for the support of these schools, and for

the educational purposes connected with them, amount in the aggregate to about £75,000 a year.\* This total may be analyzed as follows:—

	£
(1) Produce of County Rate of $\frac{1}{2}d.$ in the £ (about) ... ..	19,050
(2) Treasury grant (maximum) ... ..	19,050
(3) Grant under Local Taxation Act, for the purposes of the Welsh Inter- mediate Education Act ... ..	27,840
(4) Gross income of Endowments ... ..	9,060
	<hr/>
	£75,000

With regard to these figures the following points should be noticed:—

- (a) Every County and County Borough in Wales and Monmouthshire has rated itself to the full amount allowed by the Welsh Intermediate Education Act.
- (b) The total amount of the Residue available for Intermediate and Technical Education received under the Local Taxation Act in Wales and Monmouthshire is about £37,000 a year. About three-fourths of this is applied to Secondary Education under the County Schemes, while the remaining fourth is applied in various ways under the Technical Instruction Acts. In the majority of the Counties only a trifling sum was retained for the latter purpose—generally as a contribution in some form or other to the Agricultural Departments of the University Colleges; but in the industrial districts, that is to say, the Counties of Glamorgan and Monmouth and the three County Boroughs, a more equal division of the fund between the two branches of work was found desirable.†
- (c) It will be observed that Charitable Endowments form but a small portion (less than one-eighth) of the total. It must, however, be remembered that the amount of endowment actually applied in the provision of Secondary Education outside of the County Schemes is very considerable—probably not less than that included in those Schemes. It is probable, also, that the income from several of the included endowments will be largely increased in the course of the next few years.

\* See Appendix B.

† In addition to the rate under the Welsh Intermediate Education Act and to the Residue under the Local Taxation Act, a further sum of £22,716 was raised by rate under the Technical Instruction Act in Wales and Monmouthshire in the year 1895-6. (Return of Science and Art Department (1898) shewing application of funds by Local Authorities under the Technical Instruction Acts.) In a few instances, but not generally, County Schools receive aid for special work out of this money. In four Counties and one County Borough the County Governing Body has been adopted by the County Council as its Technical Instruction Committee.



adequacy  
of fund.

72. This fund is equivalent to a grant for every pupil now in the schools of nearly £11, exclusive of the tuition fee, and might be deemed a fairly liberal allowance, even when account has been taken of the large deductions to be made in respect of the provision of scholarships and bursaries, and of the difference between the gross and net income of the Charitable Endowments. But the general tendency to put secondary education within the reach of every child fit to profit by it, both by the establishment of a large number of small schools and by the reduction of the ordinary tuition fee to a figure in most cases far below the cost of the education given, renders the financial position anything but secure.

small *versus*  
large schools.

73. The question of small *versus* large schools, or whether the schools should be brought to the children or the children to the schools, was keenly discussed during the period of organization, and the working of the system adopted, which is emphatically one of small schools, is watched with corresponding attention.† From the figures given in Appendix B, it will be observed that, where the population is industrial and is as conveniently distributed for day-school purposes as that of any ordinary manufacturing district of England, the supply of schools is certainly not excessive. For instance, in the Administrative County of Glamorgan, there is provision for 16 schools for an estimated population of 575,412, that is to say, a school for every 36,000 of the population. But the six counties of North Wales with an aggregate (estimated) population of 464,617 have provision for 43 schools, that is to say, one school for every 10,800 of population. And from the figures given in Appendix C, it will be seen that while the 16 schools in Glamorgan have 1,679 scholars, or an average of 105 to each school, the 38 schools now open in the six counties of North Wales contain together 2,374 scholars, or an average of only 62 to each school. To take a particular example, the County of Montgomery, with an estimated population of 53,243, maintains the following schools:—

				No. of Pupils.	
Welshpool	...	...	Boys' school	42	
			Girls' do.	41	
Newtown	...	...	Boys' school	50	
			Girls' do.	45	
Llanfyllin	...	...	Mixed school	35	
Llanidloes	...	...	Boys' school	33	
			Girls' do.	25	
Machynlleth	...	...	Mixed school	52	
Llanfair	...	...	Do.	24	

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† It may be well to point out that whereas in England the question is apt to be discussed on the assumption that a "small school" would contain, say, 80 to 120 pupils, and that a school would hardly be classed as "large" with less than 300, in Wales any school with more than 100 pupils would, except in Glamorgan, be called "large," and the discussion has chiefly turned on the advantages and disadvantages of schools with 40 to 80 pupils.

It is obvious that, from the point of view of economy and convenience of classification, this proportion of schools to scholars must be costly in the working and incapable of the most effective organization, and consequently it has often been urged that this County would have achieved better educational results if it had concentrated its efforts on schools, say, at Newtown and Welshpool only. On the other hand it is argued that, had this been done, two-thirds of the children now receiving secondary education at the other schools in the County would have gone without it. There are many parents, it is said, who will send their children, and particularly their girls, to a school within walking distance and used by their own neighbours, who will not be induced even by a lavish offer of scholarships and bursaries to send them to live away from home, or even to travel to school daily by railway. Moreover, it is argued, even if the direct educational results in the larger schools are superior, yet the indirect benefit of the small schools to the districts which they serve must not be overlooked. It is no small boon to many a remote district to have in its midst such a stimulus to interest in education and culture as is supplied by the Secondary School with its staff of energetic and cultivated Teachers, its laboratory, its lending library, its prizes and scholarships, and its outlook to the University and to the wider world.

A survey of the whole of the Principality shews that out of 88 schools inspected in the present year, 3 had over 200 pupils, 19 had from 100 to 200, 10 from 80 to 100, 20 from 60 to 80, 23 from 40 to 60, and 13 had less than 40 pupils. Of the 22 schools with over 100 pupils, only 10 were outside the County of Glamorgan and the County Boroughs of Cardiff and Swansea. In this year the largest school had 247 pupils, and the smallest 15. It is, of course, to be remembered that most of the schools are in their infancy, but it is probable that the majority of the small schools will remain small.

74. So far as the teaching staff may be taken as an indication, <sup>Teaching staff in small schools.</sup> there is no sign at present that the small schools are tending to lose their secondary character. In the 56 schools which have at present less than 80 pupils, the average provision of permanent Teachers is rather more than one to every 16 pupils, and out of the 191 permanent Teachers engaged in these schools as many as 134 are graduates\* of a University. But the financial pressure, which would hardly be conjectured from these figures, unhappily makes itself felt under the head of remuneration. The Charity Commissioners, commenting in the 44th Annual Report (para. 27) on the lowness of salaries in the small schools, conclude as follows:—

“Whether, when the enthusiasm which at the present moment inspires many of them with something of missionary zeal is abated, it will be possible with such salaries to retain in their

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\* This number includes Women Teachers who have passed examinations at Oxford or Cambridge, which, if those Universities gave degrees to women, would have entitled them to degrees.

posts teachers of high standing, and possessed of high credentials, is a question of vital importance to small schools. It is to be feared that unless means can be found for rendering service in them more acceptable to the holders, these small schools will either come to be regarded as stepping stones to more remunerative service elsewhere, or will be relegated in process of time to the supervision of teachers of an inferior class." Since that Report, which dealt with the year 1896, some slight improvement has taken place, but the question still remains perhaps the most serious and pressing which these schools have to solve if they are to continue to justify their existence.

financial  
conditions  
selected  
schools.

75. The following specimens will afford some idea of the financial conditions under which the Welsh system is being worked. The first example is a school with 220 girls in a county borough. The ordinary tuition fee was £7 10s., and there were extra fees of £6 for instrumental music, £2 10s. for dancing, and 15s. for stationery. The ages \* of the girls were as follows :—

Under 12.	12-15.	15-16.	Over 16.
20	99	48	47

The permanent staff consisted of the Headmistress and 11 Assistant Mistresses. The Headmistress received a fixed salary of £150, and a capitation fee of £2 on each of the first 100 pupils, of £1 10s. on each of the second 100, and of £1 on each pupil beyond that number. The 11 Assistant Mistresses received salaries amounting in the aggregate to £1,320, or an average of £120. There were also 8 visiting teachers. The Governors, after providing for their own management expenses, cost of examination and inspection, and leaving exhibitions, provided £1,200 for the general maintenance of the school and for scholarships, in addition to the fee fund. If allowance were made for 20 scholarships, and £200 were deducted for extra payments in addition to free education, the annual grant for maintenance would be £1,000 plus the ordinary tuition fee of £7 10s. on 200 scholars, making in all £2,500 for the education of 220 children, or a little over £11 7s. a head, with no examination or expenses of management to be paid for.

The second example is a Dual School with 54 pupils (31 boys, 23 girls), situated in a rural district, with a population slightly exceeding 10,000. The tuition fees were £5, with an extra charge of 6s. for stationery.

The ages of the pupils were as follows :—

Under 12.	12-15.	15-16.	Over 16.
1	30	10	13

\* The school had been opened about 2½ years when these figures were taken. The figures in this and the following examples are those for 1897.

The permanent staff consisted of a Head Master, two Assistant Masters and one Assistant Mistress. The Head Master received a fixed salary of £180, and a capitation fee of £2 on each pupil. The Assistant Masters received an aggregate salary of £250, and the Assistant Mistress a salary of £100. There were also three Visiting Teachers. In this as in all cases outside County Boroughs, the County Governing Body pay for the examination and provide leaving exhibitions. The Local Governors receive yearly their share of the residue of the County income, after provision has been made for general County purposes. The share received by the district under consideration, for the financial year 1896-97, was £600; of which one-fifth or £120 was appropriated to Scholarships and Bursaries. The remaining £480 was supplemented by £15 15s. 6d. from a small local endowment, and by about £220 from tuition fees, making a total of £715, or rather more than £13 a head.

The third example is a Boys' school with 108 pupils in an industrial district with a population of about 38,000. The tuition fees were £8 8s. in the upper part of the school, and £6 6s. in the lower, and an extra fee of £4 10s. for music. The ages of the boys were as follows:—

Under 12.	12-15.	15-16.	Over 16.
<u>3</u>	<u>68</u>	<u>25</u>	<u>12</u>

The permanent staff consisted of a Head Master and five Assistants. The Head Master received a fixed salary of £200, and a capitation fee of £2 13s. 4d. on each pupil. The Assistant Masters receive an aggregate salary of £790. There are also three Visiting Teachers. The annual grant from the County Governing Body for the year 1896-97 was about £1,050, less one-fifth for Scholarships and Bursaries, leaving £840 for maintenance; fees produced another £810, making a total of £1,650, or about £15 a head.

The fourth example is fairly typical of the smallest class of schools in sparsely-populated districts. It is a Dual School with 44 pupils (32 boys and 12 girls). The tuition fee is £3, with an extra fee of £1 11s. 6d. for music, and a charge of 6s. for stationery. The ages of the pupils were as follows:—

Under 12.	12-15.	15-16.	Over 16.
<u>1</u>	<u>27</u>	<u>12</u>	<u>4</u>

The permanent staff consisted of a Head Master, one Assistant Master and one Assistant Mistress. The Head Master received a fixed salary of £120, and a capitation fee of £1 on each pupil. The Assistant Master received £104 and the Assistant Mistress £100. There were two Visiting Teachers. The annual grant from the County Governing Body was £393, less one-fifth for



Scholarships, leaving £315 for maintenance. Fees produced £185, and other small items another £12, making a total of £512, or £11 12s. a head.\*

It must be noted that in all these cases the staff is sufficient to teach a larger number than are in attendance, and that therefore the growth of the school up to a certain point would be a clear gain. On the other hand the costliness of the small schools cannot be fully tested by the figures given above, because in none of the cases had full provision been made to the extent required by the Scheme for the teaching of Natural Science and Technical Subjects.

**Tuition fees.** 76. Beyond a certain point the growth of many of the schools will be as much a cause for anxiety and embarrassment as for congratulation. The average tuition fee in the school year 1896-97 was only £4 14s. 10d. While a few schools have set an example of prudence by starting with a fee not far from the maximum fixed by the Scheme, in a large number of cases the fee is fixed so low as probably not to cover more than one-half of the cost of education, and in the case of many of the smaller schools, and also in the schools in the mining districts of Glamorgan and Monmouthshire, it is hardly more than one-third of the cost, and the resources of the Governing Bodies will not, of course, be sufficient to pay for one-half or more of the education of an unlimited number of children. In the school year 1896-97 the highest tuition fee charged in any County School was £9, and the lowest was £2 2s.

**Scholarships.** 77. The lowness of the average tuition fee is rendered still more striking by the liberality of the provisions for Scholarships (*see* paragraphs 36 and 52 *ante*). While in the year 1896-97 every pupil was receiving assistance to an amount equal to the difference between the tuition fee and the cost of the education received, 1,364 scholarships were awarded out of County funds on the results of a competitive examination, at a total cost of £5,738, and a further sum of £1,862 was expended in Bursaries for the assistance in various ways of the poorer children.

**Scholarships from private sources.** 77A. It is interesting in this connection to note that the application of funds from the Treasury and the rates to Secondary

\* The figures for a Mixed School of the same size may be of interest :—  
Number of pupils 43 (24 boys, 19 girls). Tuition fee, £6 (£5 if paid in advance).

Ages :	Under 12.	12-15.	15-16.	Over 16.
	2	20	7	14

Head Master, salary £160 plus £1 10s. on each pupil ; Assistant Master, £100 ; Assistant Mistress, £90.

Maintenance fund, Grant	£373
Fees	51
	<u>£424</u>

or just under £10 per head.

Education has by no means stopped the flow of private munificence. In addition to the large private contributions for buildings, as many as 24 Scholarships tenable in the County Schools were given by private persons in the year 1896-97.

78. A few of the County Schools are supplementing their income by earning grants from the Science and Art Department, but in spite of the prominence given to Natural Science and Technical instruction in many of the schools, and of the fact that so large a proportion of the pupils are drawn from the classes which the Science and Art Department is most ready to assist, only two of the schools are at present worked as Schools of Science under that Department. There seems to be a desire, due to a belief that the regulations would have a cramping effect on the schools, and would hinder their free development on Welsh lines, to avoid the acceptance of aid from that source.

79. A tabulated statement of the number of Teachers, and of the number of those among them who have a University Degree, will be found in Appendix E. The schools are on the whole so small that, in estimating the number of pupils to each member of the permanent Staff, it is fair to include the Head Masters and Head Mistresses. The result so obtained over the whole of the schools is that there is one permanent Teacher to every 17 pupils. Taken in connection with the number of visiting Teachers (130), this may be considered a satisfactory supply. The proportion of graduate to non-graduate Teachers on the permanent staff (267 to 143) still leaves room for improvement, but the creation of the University of Wales, and of the Secondary School system in organic connection with it, ought soon to produce a marked change in that respect.

80. Although the general proportion of teachers to pupils is satisfactory, it is not always so in particular cases, especially in Dual Schools. In some of these schools where the numbers are small, or where the numbers of boys and girls are not evenly balanced, the Dual System, if rigidly adhered to, may easily make a fair distribution of the teaching power a matter of some difficulty, and it becomes of interest to note, from this point of view, the extent to which use is being made of the power given by the Schemes to teach boys and girls together in schools which are primarily intended to be conducted in separate departments. In the 41 Dual Schools inspected in the present year there were, in the aggregate, 189 forms, and in 120 of these forms boys and girls were taught together. How far this movement in the direction of the "Mixed" System is due to a real preference for it, or to the difficulties connected with finance and classification in small schools, it is not possible here to decide, but it is clear from the figures that the progress of the Mixed System in Wales cannot be measured without reference to the Dual Schools, as well as to those formally described as Mixed in the Schemes and in Official Returns.

The Dual System has been the subject of some discussion from another point of view. It has been urged by those specially interested in the education of girls, and in the position of women-teachers, that the present system, which gives to a Head Master the control of the internal management of a school worked in two departments, is not desirable in the interests of either girls or Assistants. The answer that the Head may be either a Master or Mistress is not accepted, because in the present state of public opinion women and men are not on equal terms as candidates for such a post, and also because the objection in principle would still remain if they were so. That there is some force in the criticism may be admitted, but it can hardly be doubted that the adoption of the Dual system was historically justifiable. The problem before the organizers of Welsh Secondary Education was how to secure that adequate provision should be made for girls. Where there appeared to be too little money for separate schools, the localities were generally in favour of giving the preference to the boys. The idea of the co-education of the sexes was a novel one, and public opinion was certainly unprepared for a general establishment of Mixed schools. In these circumstances the Dual system was an acceptable compromise. It provided for the education of girls on a cheaper plan than that of separate schools, and it introduced the experiment of co-education with the maximum of cautiousness. It is quite possible, however, that it has been adopted in some places where separate schools might have been established without financial difficulties, and in others where the Mixed system, with its greater economy and facility of classification might be used without risk; and it is not improbable that it will prove in the majority of cases to have been but a stage on the way to separate schools in the larger districts, and to Mixed schools in the smaller.

observations  
curriculum.

81. Analyses of the Time Tables of County Schools, taken from different parts of the country, are given in Appendix F; and in Appendix G will be found some particulars of the ground covered by the Examination in 1897, but it is too early at present to attempt to draw positive conclusions from the facts with regard either to the standard of the work attempted, or to the tendencies of the schools to this or that branch of studies. In the first place, the large majority of the schools have been opened for too short a time to allow of the complete development of their classification and course of studies. The upper forms still contain pupils who have not been prepared in the lower, and the uncertainty as to staff arrangements incidental to the opening of new schools is still hampering the work. The incomplete provision of buildings has also a controlling effect on the curriculum. It is fruitless, for example, to compare the time given to literary and scientific subjects respectively in schools which have been hastily started in temporary premises, and are still waiting for laboratories and lecture rooms. Again, although a few schools are marked out from the others by

special regulations with regard to fees, age of leaving, and curriculum, yet, on the whole, distinctions of grade have not been made with anything like the precision which characterised the recommendations of the Report of the Schools Inquiry Commission (1867), and have to a considerable extent been left to be worked out under the combined influences of the Central Welsh Board and the County and Local Governing Bodies, acting with adequate knowledge of local needs. For similar reasons it is premature to speak of the organization of studies for boys and girls respectively in Dual and Mixed Schools, but it may be said that so far the tendency appears to be towards the assimilation of the curriculum for the sexes, the differences in most cases being only those which are required to find time, in the case of girls, for such special studies as ordinary needle-work, dress-making and cutting-out, and cookery. The time required for these is, in most cases, found at the expense of Natural Science rather than of literary subjects.

82. With regard to the grading of the schools, it may be added Grading of Schools. that the majority of the new schools may be described as schools of the "Second-grade," that is to say, intended for children who will stay at school till 16 or 17 years of age, with facilities for the development of a "First-grade" top or section. A more definite "First-grade" character has, however, been given by the Schemes to the schools established in the three County Boroughs, and to those at Wrexham and Penarth, and the ancient foundations at Bangor and Haverfordwest are continuing to work on First-grade lines. It is important also to remember, in estimating the provision for the higher forms of secondary education, particularly on the classical side, that the important endowed schools which are not regulated by Schemes under the Welsh Act (*see* para. 56, *ante*), are for the most part doing work of that kind.

83. The complaint of the Departmental Committee (1880) Early removal of Pupils. that in Wales enthusiasm for education is found in conjunction with singular ignorance of what is meant by that word, is still unhappily justified by the too early removal of children from the schools. It has been found that a large number of children are being withdrawn before the completion of two years in schools in which the humblest scheme of studies requires at least a three years' course. This defect may, no doubt, be partly accounted for by the effect of the first enthusiasm which induced parents, who could ill afford the expense, to send their children if only for a year to the school which they had heard so much of, and to which, perhaps, they had contributed their small offerings; partly, also, by the fact that when the schools were first opened some pupils were sent to them who had almost completed their school-life elsewhere; but in most cases the explanation is of a more ordinary character: parents are apt to look on the Secondary School as providing a "finishing" to an elementary education. In the industrial districts they are tempted to withdraw their children by the high wages which



youths of 15 and 16 can earn, and in rural districts in order that they may have their help on the farm. But, whatever the causes, the evil is being vigorously exposed and combated, and it is hoped that powerful remedies will be found in the leaving Exhibitions, which are only just beginning to be offered, and still more in the leaving Certificates, the arrangements for which are now under the consideration of the Central Welsh Board. Meanwhile, though the figures are far from satisfactory, it may be noted that rather more than 16 per cent. of the pupils in the schools are over 16 years of age, and more than 6 per cent. are over 17, a result which, especially if the infancy of so many of the schools is considered, compares not unfavourably with the statistics respecting the ages of pupils in Endowed Secondary Schools in England, recently published by the Education Department. It is noteworthy that more girls than boys stay at school after reaching their 16th birthday.

Relation of  
Primary and  
Secondary  
Organiza-  
tions.

84. In Appendix D will be found a table shewing the last previous place of education of the pupils in the County Schools, from which it appears that no less than 4,509 out of the total number of 6,877 came from the ordinary Public Elementary Schools. It will be readily understood that this fact has a most important influence on the character of the Secondary Schools, and on the nature of the work which the various school authorities have to perform. It means, in the first place, that the majority of the children enter the Secondary School at a rather later age than that which Secondary teachers would generally think desirable, and have not had the best kind of preparation for the Secondary course. Even in the urban districts, where the Primary Schools are often remarkably good of their kind, the ground which has been covered by a child who has reached the Fifth Standard (the Standard for admission to the Secondary School in most counties) is narrower than that covered by the class in the Secondary School suitable for children of the same age, and purely elementary work has to be done in subjects in which some progress would already have been made in a more ideal preparatory school. In the more backward rural districts this difficulty is naturally accentuated. In many rural Primary Schools a little elementary Geography and Drawing are the only subjects taken in addition to Reading, Writing, and Arithmetic, and the child who leaves such a school for the Secondary School has to start upon History, Latin, French, and Natural Science, from the very beginning. There is the further difficulty that this element, being in so many cases the largest in the school, exercises a preponderating influence in determining classification and, to some extent, schemes of study, and the problem of bringing into harmony with it the element which has been prepared on more convenient lines is often a very perplexing one. It will be seen, therefore, that the connection of the two classes of schools being such as it is, the co-operation of the Authorities on either side must be of vital importance, and that on the Secondary Authorities, in particular, rests the grave responsibility of seeing that their system

is so worked as to help to elevate and strengthen the Primary Schools. Perhaps the most promising way of attacking the problem is that afforded by the Examinations for entrance Scholarships, restricted to candidates from the Public Elementary Schools. These may, with proper care, be so arranged as to become a stimulus and encouragement to the schools from which the candidates come; but in order that, from want of experience of the local conditions of Elementary education, they may not have precisely the contrary effect, it is essential that the Elementary School Teachers should be consulted frequently on a matter so closely affecting their own work and the welfare of their best pupils; and it is satisfactory to know that in several counties efforts to secure their active co-operation in this work are meeting with success.

85. The Central Welsh Board of Intermediate Education, the constitution and functions of which have already been described (*ante*, para. 61), held its first ordinary meeting on the 12th December, 1896. Some features in the composition of the Board after its first election are worthy of notice:—

- (a) Out of 80 members 26 had served on the Joint Education Committees appointed to prepare Schemes under the Act.
- (b) The Head Masters and Head Mistresses of County Schools are entitled by the Scheme to five representatives on the Board, but the actual number of them elected in various ways was 10.
- (c) The total number of members of the Board who were or had been professionally engaged in teaching was 31.
- (d) The minimum number of women members provided for by the Scheme is three: the actual number elected was nine.

86. The Executive Committee was appointed at the first meeting of the Board, and held its own first meeting in January, 1897. It included:—

- 3 Principals of the Welsh University Colleges.
- 1 Senior Deputy Chancellor of the University of Wales.
- 1 Professor of a Welsh University College.
- 1 Head Master of a County School.
- 1 Head Mistress of a County School.
- 1 Head Master of a Public Elementary School.
- 7 Members of County Governing Bodies.

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87. Mr. Owen Owen, M.A. (Oxford), was appointed Chief Inspector in 1897, and also acts as the Chief Executive Officer of the Board for the organisation of examinations.

88. The Central Board conducted the examination and inspection of the County Schools for the first time in the school year beginning in September, 1896, and ending in July, 1897. The inspection of the schools was undertaken by the Chief Inspector.

assisted by Mr. James Headlam, late Fellow of King's College, Cambridge. It is directed to test the working of the system on its administrative and its educational sides, and includes a conference between the Inspector and the governing body of each school, as well as a visit or visits to the school itself. The administrative inspection deals with the observance of the scheme in respect of the constitution and business arrangements of the governing body, the condition of the property, and the management of finance. The educational inspection is directed to obtain information as to the adequacy and suitability of the accommodation and apparatus provided for the scholars (including the means for physical exercise and recreation); the number, qualifications, and salaries of the teaching staff; the tuition and boarding fees; the number, age, and residence of the scholars, and the occupation of their parents; the character and suitability of the instruction given; the regulations for the entrance examination; and the working of the scholarship system. The Inspector is also expected to offer general observations in his Report upon the organisation of classes, and upon discipline and methods of instruction, and for this purpose may, at his discretion, hear a lesson given to any class, or put questions to a class himself.

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89. For the purpose of examination, the Head Masters and Head Mistresses of schools were invited to make returns describing the work in which they wished each class of their schools to be examined. These returns were submitted to a body of six Chief Examiners, who considered them, with the assistance of the Chief Inspector, and reported thereon to the Executive Committee of the Board, with particular reference to the number of papers and of examiners required. After consideration of that Report, the Executive Committee appointed six additional Examiners in subjects which the Chief Examiners were not prepared to take, and a number of Assistant Examiners to aid in marking the papers returned by the scholars. Schedules, giving a description of the ground to be covered by the Examination Papers, were sent to the schools, and arrangements were also made for the Oral Examination of certain classes in cases where it was applied for. In evidence of the efforts made to suit the examination to the special conditions of every school, it may be stated that as many as 365 distinct papers were set by the Examiners. The examinations were held simultaneously, and began on the 19th July. The Reports of the Examiners were sent to the Chief Inspector, who was instructed to prepare a Report of the results of the examination of each school, together with his own Report on the results of inspection. These Reports were considered by the Executive Committee during the early autumn, and were then submitted to the Central Board, together with the recommendations of the Committee with regard to the award of the Treasury Grant. The Central Board took into consideration the Report of the Executive Committee on the 29th October, and forwarded their own Report and recommenda-

tions on the 10th November to the Charity Commissioners, who in turn submitted their own Report and recommendations to the Treasury in the course of the following January.

The arrangements above described must be regarded as, in some respects, tentative and liable to modifications or further development as the result of the experience which is being rapidly gained. The regulations for the examinations for the school year 1897-98, already show signs of this development. For example, opportunity has been given to every school, after consideration of the examination schedules issued by the Board, to submit alternative schedules, and it has further been decided that for the lower forms in all the schools Oral Examination only will be considered sufficient.\* Arrangements are also being made to secure for the future that the examination schedules prepared by the Board shall be issued to the schools before the beginning of the school year for which they are designed, so that they may be before the teaching staff when the course of work for the new year is being determined. In the present year arrangement has been made for Oral and Practical Examination in certain subjects in which written papers are also submitted, but the question how to test the efficiency of the teaching in many of the technical and special subjects included in the curricula is still under consideration.

90. The expenditure of the Board for the year 1896-97 was:—

					£	s.	d.	
Administration	-	-	-	-	832	15	1	Expenditure of the Board
Examination	-	-	-	-	2,834	16	9	
Inspection	-	-	-	-	976	9	4	
Total	-	-	-	-	£4,644	1	2	

The total cost for each pupil examined was 16s. 9½d., and the cost of Examination alone 10s. 0¾d.

This expenditure, though certainly not extravagant in relation to the work done, is rather more than the resources of the Board, and of the County Governing Bodies, can support, and it appears to be doubtful whether the examination can be continued on the present lines without further financial assistance. The fact is that, while the revenue required for the Board was estimated to provide for such examination and inspection as would satisfy the Treasury Regulations (a purpose for which it is amply sufficient), the Board has almost inevitably been led to attempt a good deal more. It has, in the first place, to meet the demand that the State Examination shall not be merely added to the list, already intolerably long, of public examinations for which the teachers have to prepare their pupils; and consequently the Board is expected to make its examination cover the whole of the School, and serve not only as a test of efficiency but as a substitute for the ordinary yearly examination by which the classification of the scholars for the ensuing year is determined.

\* See Appendix H.



In the second place, it has to recognise the fact that the school authorities are determined that the Treasury Grant shall not become the means of establishing in Wales a Government Code of Secondary Education, and that they demand for every school freedom to develop on its own lines and by its own methods within the limits set by its scheme, and subject to the conditions necessary to test its efficiency. But this claim involves the examination of each school in the work actually undertaken by it in the year, and the consequent recognition of many degrees of proficiency in various subjects of instruction, and a corresponding multiplication of papers to be set. The Board has further to meet the urgent demand for the establishment of a system of certificates such as may be accepted by professional and other examining bodies in lieu of their own examinations or of part of them. Regulations for the award of such certificates are now under the consideration of the Board, and there is a general desire that, in order to avoid further multiplication of examinations, the ordinary examination of the Board may serve for this purpose also.

The expenditure on account of inspection is also likely to grow. The schools were, in the present year, inspected by the Chief Inspector, single-handed. But the task will in the near future be clearly beyond the powers of one man, and additions to the Staff are likely to be required on the further grounds (1) that, where so large a proportion of the pupils are girls, part of the inspection should be entrusted to a woman, and (2) that a permanent inspectorate is wanted for some of the practical and special branches of instruction, and could be utilised with advantage for the purpose of Oral Examination.

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91. Of the other functions which the Board is empowered to exercise (*see* paragraph 62, *ante*), the most important so far has been that of arranging for Conferences. Two series of these have been organised; one on Manual Training, and the other on the teaching of Modern Languages in Secondary Schools. For the discussion of the first of these questions meetings were held at the towns of Aberystwyth, Bangor, and Cardiff. For the discussion of the second question a Conference has already taken place in the present year at Bangor, and arrangements have been made for another at Merthyr Tydfil, and for a third at Carmarthen.

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92. With the establishment of the County Schemes for secondary education (almost contemporary with that of the University of Wales in 1893), the work of organisation of secondary education may be said to have closed. It is true that much remains to be done in filling in the frame-work, and in developing the system to its full capacity in the light of experience, but in the main it appears that the particular machinery suited to the character of the people and to the social and industrial conditions of the country has been provided, and that henceforth attention will be more and more concentrated upon questions of curriculum and educational method.

CHARITY COMMISSION,

July, 1898.

## Appendix A.

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REGULATIONS made by the LORDS COMMISSIONERS of HER MAJESTY'S TREASURY under SECTION 9 of "THE WELSH INTERMEDIATE EDUCATION ACT, 1889."

1. The Treasury will in each year pay, subject to the conditions and reductions hereinafter stated, in aid of each school aided by a county, and subject to a scheme made under the Act, a grant equal to such part of the amount payable in that year in pursuance of the Act out of the county rate as may be designated in respect of the school by a schedule prepared by the County Governing Body and approved by the Charity Commissioners. The grant for each school shall fall due on such day as may be from time to time appointed by the Treasury.\*

2. The grant will be paid to the persons to whom the County Council contribution is directed by scheme to be paid in pursuance of section 7, subsection 2 of the Act.

3. The conditions required to be fulfilled by a school in order to obtain an annual grant under the Act are as follows :—

- (a.) The school must be efficient as regards instruction.
- (b.) The school premises must be healthy, and suitable for the purposes of an intermediate school.
- (c.) The school premises must provide sufficient accommodation for the scholars attending the school.
- (d.) The school must be supplied with suitable furniture and apparatus.
- (e.) The school must be conducted in accordance with the scheme under which it is established.
- (f.) The school must be open at all reasonable times to officers authorised by the Charity Commissioners, and any returns or information called for by that Department must be duly furnished.
- (g.) The school must be reported on by the Charity Commissioners in respect of the fulfilment of the preceding conditions or otherwise.

4. For the purpose of ascertaining whether these conditions are fulfilled these shall be an annual examination and inspection of the school. Such examination and inspection may be conducted by a Central Welsh Board for Intermediate Education, established by scheme under the Act, provided that such scheme is approved by the Treasury. The results of such examination and inspection shall be reported to the Charity Commissioners; and the Charity Commissioners will make such inquiry, and, in case of need, such further examination or inspection as they think necessary.

5. If the Charity Commissioners report to the Treasury that any of these conditions are not satisfied, the grant may be refused or may be reduced by such number of tenths as the Treasury may determine.

6. Any officer authorised in that behalf by the Charity Commissioners shall be at liberty to attend any meeting of the Central Welsh Board for Intermediate Education, or of any Committee of that Board, and to take part in the proceedings, but shall not have a right to vote.

(Signed) R. E. WELBY.

Treasury Chambers,  
June 20, 1892.

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\* In cases where a change is made in the date at which the grant falls due, or where there is other sufficient reason, the grant may be made for a period greater or less than a year; and in that case it shall be proportionately increased or diminished.

**Appendix B.**

TABLE showing Estimated Population (1898), Number of Schools for which provisio  
is made by the Schemes, and County Education Fund in each County and  
County Borough.

County or County Borough.	Estimated Population (1898).	No. of Schools.	Income from Public Funds and Endowments Included in County Schemes.				
			½d. Rate.	Treasury Grant (maximum).	Local Taxation Act Grant.	Endowments Gross Income (approximate).	Total Income.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Anglesey -	49,165	3	424 4 0	424 4 0	514 6 11	712 0 0	2,074 14 11
Brecknock -	50,504	4	546 19 7	546 19 7	1,417 4 4	—	2,511 3 6
Cardiff -	177,770	2	2,080 0 0	2,080 0 0	1,367 6 10	1,196 0 0	6,623 6 10
Cardigan -	58,578	4	590 0 0	590 0 0	1,249 14 10	—	2,429 14 10
Carmarthen -	134,753	7½	1,322 2 9	1,322 2 9	2,589 0 8	138 0 0	5,371 6 2
Carnarvon -	116,359	10	1,073 17 10	1,073 17 10	2,374 19 3	965 0 0	5,477 14 11
Denbigh -	123,471	9	1,227 2 4	1,227 2 4	2,805 6 1	516 0 0	5,775 10 9
Flint -	75,002	5	896 2 10	896 2 10	1,500 0 0	170 0 0	3,462 5 8
Glamorgan *	575,412	15	5,100 9 11	5,100 9 11	5,000 0 0	1,436 0 0	16,636 19 10
Merioneth -	47,377	7	569 6 7	569 6 7	1,076 17 10	485 0 0	2,700 11 0
Monmouth -	223,654	6	1,967 13 10	1,967 13 10	2,390 10 10	1,000 0 0	7,325 18 6
Montgomery	53,243	9	761 8 5	761 8 5	2,144 19 5	30 0 0	3,697 16 3
Newport -	70,619	2	667 0 0	667 0 0	674 5 1	540 0 0	2,548 5 1
Pembroke -	86,528	8½	874 6 6	874 6 6	1,610 1 10	980 0 0	4,338 14 10
Radnor -	20,664	2	360 0 0	360 0 0	765 6 2	164 0 0	1,649 6 2
Swansea -	102,001	2	650 0 0	650 0 0	361 0 0	743 0 0	2,404 0 0
Totals -	1,965,100	96	19,060 14 7	19,060 14 7	27,841 0 1	9,065 0 0	75,027 9 3

\* In this County there is an additional Girls' School, regulated by a separate Scheme under the Welsh Act, with an Endowment consisting of 36 per cent. (something over £2,000) of the nett income of Howell's Charity.

Appendix C.

PARTICULARS OF COUNTY SCHOOLS (1897-98).

COUNTY OR COUNTY BOROUGH.	Estimated Population (1898).	No. of Schools.			No. of Scholars.				Ages of Scholars.														
		Boys.	Girls.	Dual.	Mixed.	Total.	Boys.	Girls.	Board- ers.	Day Scholars.	Total.	Under 12.		12 & under 15.				15 & under 16.16 & under 17.				Over 17.	
												Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
Anglesey	49,165	—	—	2	—	2	97	71	15	153	168	9	4	50	45	25	16	7	5	6	1	—	—
Brecknock	50,504	—	1	2	—	4	133	91	5	219	224	7	4	91	50	23	20	11	7	1	10	—	—
Cardiff	177,770	—	1	—	—	—	—	247	—	247	247	—	24	—	109	—	50	—	43	—	21	—	—
Cardigan	58,578	1	—	4	—	1	253	120	5	368	373	7	5	129	63	55	24	28	19	34	9	—	—
Carmarthen	134,753	2	3	2	7	307	307	134	18	423	441	6	15	130	106	55	49	25	23	22	10	—	—
Carmarvon	116,359	1	1	5	1	8	331	264	3	592	595	11	8	201	130	66	62	34	40	18	24	—	—
Carnarvon	123,471	3	1	2	1	7	303	201	40	464	504	13	11	188	127	65	40	25	13	12	10	—	—
Denbigh	75,002	2	—	3	—	3	220	101	28	283	321	22	5	141	70	31	15	20	6	6	5	—	—
Flint	575,412	2	4	10	—	16	840	839	96	1,583	1,679	34	44	560	515	140	154	66	79	34	43	—	—
Glamorgan	47,377	2	2	3	—	7	214	225	89	350	439	5	12	115	115	38	54	32	32	22	12	—	—
Merioneth	223,654	—	1	3	—	4	136	234	—	370	370	23	38	96	137	10	39	5	14	2	6	—	—
Monmouth	53,243	3	3	—	3	9	194	153	—	347	347	5	1	110	82	43	32	20	23	16	15	—	—
Montgomery	70,619	1	1	—	—	2	140	97	4	233	237	11	4	88	47	30	26	8	13	3	10	—	—
Newport	86,528	1	1	4	2	8	255	183	14	424	438	20	30	137	85	49	37	28	19	21	12	—	—
Pembroke	20,664	—	—	1	—	—	27	37	—	64	64	2	1	22	30	3	5	—	1	—	—	—	—
Radnor	102,001	1	1	—	—	2	223	201	—	430	430	29	16	115	87	49	35	28	28	8	35	—	—
Swansea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	1,965,100	20	20	41	7	88	3,679	3,198	317	6,560	6,877	204	222	2,173	1,798	682	638	337	362	205	223	—	—



**Appendix D.**

TABLE shewing the last previous place of Education of Scholars in County Schools, 1897-98.

County or County Porough.	Numbers of Scholars admitted from															Total.
	Public Elementary Schools.			Higher Grade Elementary.			Public Secondary.			Private Secondary.			Private Tuition.			
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	
Anglesey .	68	48	116	2	2	4	9	3	12	17	15	32	1	3	4	168
Brecknock .	116	67	183	3	2	5	5	4	9	8	17	25	1	1	2	224
Cardiff .	—	37	37	—	31	31	—	15	15	—	152	152	—	12	12	247
Cardigan .	196	99	297	4	3	7	6	2	8	42	15	57	3	1	4	373
Carmarthen .	177	120	297	23	13	36	16	9	25	13	39	52	6	21	27	437
Carnarvon .	283	200	492	—	1	1	12	11	23	30	37	67	6	5	11	595
Denbigh .	211	128	339	5	2	7	19	6	25	63	57	120	5	8	13	504
Flint .	155	60	215	4	—	4	20	5	25	31	33	64	10	3	13	321
Glamorgan .	648	510	1,158	78	56	134	35	23	58	71	186	257	6	56	62	1,669
Merioneth .	143	125	268	41	34	75	11	12	23	10	30	40	9	24	33	439
Monmouth .	124	197	321	—	—	—	8	9	17	3	20	23	1	8	9	370
Montgomery .	157	99	256	—	—	—	13	11	24	19	35	54	5	8	13	347
Newport .	85	45	130	1	—	1	4	—	4	50	41	91	—	11	11	237
Pembroke .	171	96	267	12	2	14	12	10	22	34	51	85	26	24	50	438
Radnor .	26	29	55	—	—	—	1	—	1	—	8	8	—	—	—	64
Swansea .	53	25	78	75	25	100	21	56	77	74	81	155	6	14	20	430
Total .	2,615	1,894	4,509	248	171	419	192	176	368	465	817	1,282	85	199	284	6,863

**Appendix E.**

PARTICULARS OF TEACHING STAFF OF COUNTY SCHOOLS (1897-98).

County or County Borough.	No. of Schools.	No. of Scholars.	No. of Teachers.		Particulars as to Permanent Staff.			
			Perma- nent.	Visiting.	Men.	Women.	Grad.	Non- Grad.
Anglesey .	2	168	10	2	6	4	5	5
Brecknock .	4	224	13	8	8	5	9	4
Cardiff .	1	247	13	8	—	13	7	6
Cardigan .	5	373	20	3	14	6	15	5
Carmarthen .	7	441	27	15	13	14	20	7
Carnarvon .	8	595	38	11	23	15	26	12
Denbigh .	7	504	31	10	21	10	17	14
Flint .	5	321	19	7	13	6	14	5
Glamorgan .	16	1,679	96	37	47	49	57	39
Merioneth .	7	439	26	5	14	12	17	9
Monmouth .	4	370	21	2	9	12	14	7
Montgomery .	9	347	24	1	13	11	15	9
Newport .	2	237	15	4	8	7	12	3
Pembroke .	—	438	28	8	16	12	20	8
Radnor .	1	64	3	1	1	2	2	1
Swansea .	2	430	26	8	14	12	17	9
Totals .	88	6,877	410	130	220	190	267	143

# Appendix F.

## ANALYSIS OF SCHOOL TIME TABLE.

School of 247 Girls.

Tuition Fee, £7 7s.

Subject.	Form	Number of Minutes devoted to Subject per Week.												
		I.	IIb.	IIA.	Remove.	III. Lower.	III. Middle.	III. Upper.	IVb.	IVA.	Vb.	VA.	VI.	VI. Higher Local.
Prayers		50	50	50	50	50	50	50	50	50	50	50	50	50
Arithmetic		160	160	160	165	160	165	160	125	120	125	90	40	—
Algebra		—	—	—	—	—	—	—	80	85	80	85	40	45
Euclid		—	—	—	—	—	—	—	90	80	90	90	45	45
Geography		85	80	80	80	80	85	85	80	85	85	80	—	—
History		80	80	80	85	80	80	80	85	80	80	80	130	85
Scripture		80	85	85	70	70	85	90	90	45	40	40	—	—
Grammar		80	85	85	80	85	85	85	85	85	90	40	45	—
Composition		45	45	45	40	40	40	40	—	—	—	—	—	—
Literature		—	—	—	—	85	80	80	80	40	45	80	—	—
Latin		—	—	—	—	—	—	—	—	—	—	—	40	80
French		135	110	135	135	175	165	165	170	170	165	170	125	—
Latin or German		—	—	—	—	—	—	—	—	130	130	170	—	—
Mechanics		—	—	—	—	—	—	—	—	—	—	—	45	45
Botany		—	—	—	—	—	90	85	85	40	80	85	45	—
Roman History		—	—	—	—	—	—	—	—	—	40	40	—	—
Drawing		85	85	60	80	60	85	90	90	90	90	90	90	—
Poetry		65	80	85	90	45	45	—	—	—	—	—	—	—
Sewing		60	60	30	30	30	—	—	—	—	—	—	—	—
Dictation		20	—	45	60	—	—	—	—	—	—	—	—	—
Reading		40	45	45	45	—	—	—	—	—	—	—	—	—
Science		—	45	40	—	45	—	—	—	—	—	—	—	—
Cooking		—	—	—	—	—	—	—	—	—	60	60	—	—
Singing, Preparatory		30	30	30	30	30	—	—	—	—	—	—	—	—
Preparation		360	360	270	270	270	450	360	270	315	90	90	250	—
Drilling		90	65	40	40	45	45	45	45	45	45	45	—	—
Recreation		120	120	120	120	120	100	100	100	100	100	100	80	—

## ANALYSIS OF SCHOOL TIME TABLE.

School of 54 Boys.

Tuition Fee, £5 5s.

Subject.	Form	No. of Minutes devoted to Subject per Week.					
		VI.	V.	IV.	III.	II.	I.
Geography		—	—	—	45	45	45
History		60	150	120	120	120	120
Scripture		45	45	45	45	45	45
English		150	150	135	135	135	135
Latin		240	285	255	300	265	285
French		180	180	225	225	180	180
Greek		255	—	—	—	—	—
Mechanics		60	60	60	60	60	60
Shorthand		—	45	45	45	45	—
Mensuration		—	—	—	—	45	45
Unseens		90	90	—	—	—	—
Mathematics		375	375	375	375	375	375
Science		—	120	240	150	60	60
Writing		—	—	—	—	90	135
Vocal Music		—	—	60	60	60	60
General Work		—	45	—	—	—	—
Revision		—	—	—	—	60	60
Repetition		—	—	—	—	45	45
Examination		60	60	60	60	60	60
Preparation		—	60	90	90	—	—

## (A.)—ANALYSIS OF SCHOOL TIME TABLE.

Dual School of 38 Boys and 29 Girls. Tuition Fee, £5.

Subject.	Form	No. of Minutes devoted to Subject per week.			
		I.	II.	III.	IV.
Arithmetic . . . . .		120	—	—	—
Geography . . . . .		60	105	60	—
History . . . . .		45	45	90	150
Scripture . . . . .		45	—	45	—
English Grammar . . . . .		150	105	120	150
Composition . . . . .		45	—	—	—
Latin . . . . .		—	60	120	150
French . . . . .		120	105	60	165
Welsh . . . . .		45	45	45	—
Physics . . . . .		—	—	—	120
Chemistry . . . . .		60	150	150	120
Mathematics . . . . .		45	180	120	120
Drawing . . . . .		60	—	60	60
Reading . . . . .		45	—	—	—
Vocal Music . . . . .		—	—	45	45
Plane and Solid Geometry . . . . .		60	60	—	60

## (B.)—ANALYSIS OF ABOVE TIME TABLE SHOWING POINTS IN WHICH CURRICULA FOR BOYS AND GIRLS DIFFER.

Subject.	Form	No. of Minutes devoted to Subject per week.			
		I.	II.	III.	IV.
Boys.					
History . . . . .		45	45	—	—
English . . . . .		45	45	—	—
Physics . . . . .		—	150	150	—
Drawing . . . . .		—	60	60	60
Woodwork . . . . .		105	105	90	90
GIRLS.					
History . . . . .		60	60	—	—
Plane and Solid Geometry . . . . .		—	—	60	—
Botany . . . . .		—	60	60	60
Drawing . . . . .		—	60	—	—
Cookery . . . . .		90	90	90	—
Needlework . . . . .		45	45	45	45
Laundry Work . . . . .		45	45	45	45
Vocal Music . . . . .		45	45	—	—

## (C.)—ANALYSIS OF TIME TABLE.

Dual School of 30 Boys and 26 Girls. Tuition Fee, £5.

Subject.	Form	No. of Minutes devoted to Subject per week.			
		I.	II.	III.	IV.
Prayers . . . . .		50	—	—	—
Arithmetic . . . . .		45	135	—	—
Algebra . . . . .		—	125	—	—
Euclid . . . . .		—	105	—	—
Geography . . . . .		135	90	115	115

(C.)—ANALYSIS OF TIME TABLE—*continued.*

Subject.	Form	No. of Minutes devoted to Subject per Week.			
		I.	II.	III.	IV.
History - . . . .		150	115	135	90
Scripture . . . .		90	90	90	—
Grammar . . . .		115	90	90	150
Composition . . . .		105	45	45	—
Latin . . . . .		—	135	—	45
French . . . . .		—	135	135	90
Welsh . . . . .		—	90	90	90
Mechanics . . . .		—	—	—	90
Shorthand . . . .		—	45	—	—
Reading . . . . .		135	—	—	—
Drawing . . . . .		45	45	45	—
Writing . . . . .		90	—	—	—
Singing . . . . .		60	60	60	60
English Preparation . . . .		—	—	—	45
Latin do . . . . .		—	—	—	45
Preparation . . . .		—	—	—	135
Drilling . . . . .		45	45	—	—

(D.)—ANALYSIS OF FOREGOING TIME TABLE.

Showing points in which Curricula for Boys and Girls differ.

Subject.	Form	No. of Minutes devoted to Subject per Week.			
		I.	II.	III.	IV.
BOYS.					
Theoretical Chemistry . .		—	105	105	105
Practical Chemistry . . .		—	—	90	90
Carpentry . . . . .		45	105	—	—
Preparation . . . . .		—	—	60	—
GIRLS.					
Domestic Economy . . .		—	45	45	45
Cookery . . . . .		—	120	120	60
Sewing . . . . .		45	45	—	—
Preparation . . . . .		—	—	45	45
Drilling . . . . .		—	—	45	45

ANALYSIS OF TIME TABLE FOR BOYS.

Dual School of 71 Boys and 29 Girls. Tuition Fee, £4.

Subject.	Form	No. of Minutes devoted to Subject per Week.					
		I.	II.	III.	IV.	V.	VI.
Prayers . . . . .		50	50	50	50	50	50
Arithmetic . . . . .		140	140	70	70	—	—
Algebra . . . . .		115	115	125	125	—	—
Euclid . . . . .		135	135	120	120	—	—
Mathematics . . . . .		—	—	—	—	270	305



ANALYSIS OF TIME TABLE FOR BOYS—*continued.*

Subject.	Form	No. of Minutes devoted to Subject per Week.					
		I.	II.	III.	IV.	V.	VI.
Geography . . . . .		90	90	90	90	90	—
History . . . . .		115	115	135	135	135	125
Scripture . . . . .		—	—	90	90	70	—
Grammar . . . . .		135	135	90	90	90	135
Composition . . . . .		90	90	45	45	—	—
Literature . . . . .		135	135	90	90	180	—
Latin . . . . .		90	90	135	135	125	180
French . . . . .		135	135	115	115	160	160
Welsh . . . . .		90	90	90	90	90	—
Greek . . . . .		—	—	—	—	135	—
Chemistry . . . . .		—	—	90	90	135	135
Practical Chemistry . . . . .		—	—	45	45	45	—
Elementary Science . . . . .		—	—	—	—	—	90
Agriculture . . . . .		90	90	—	—	—	—
Book-keeping . . . . .		45	45	90	90	90	—
Dictation and Spelling . . . . .		75	75	—	—	—	—
Drawing . . . . .		45	45	—	—	—	—
Preparation . . . . .		—	—	45	45	135	470
Head Master's revision . . . . .		45	45	45	45	—	—
Drilling . . . . .		30	30	30	30	30	30

## ANALYSIS OF SCHOOL TIME TABLE FOR GIRLS.

Dual School of 71 Boys and 29 Girls. Tuition Free, £4.

Subject.	Form	No. of Minutes devoted to Subject per Week.			
		I.	II.	III.	IV.
Prayers . . . . .		75	75	75	75
Arithmetic . . . . .		90	135	90	135
Algebra . . . . .		120	120	120	150
Euclid . . . . .		105	90	90	150
Geography . . . . .		90	90	90	90
History . . . . .		45	120	120	120
Scripture . . . . .		105	45	45	45
Grammar . . . . .		120	120	120	120
Composition . . . . .		30	30	30	30
Literature . . . . .		45	105	105	105
Latin . . . . .		120	120	120	180
French . . . . .		120	225	225	210
Chemistry . . . . .		—	90	90	90
Practical Chemistry . . . . .		—	—	30	30
Domestic Economy . . . . .		90	—	—	—
Singing . . . . .		30	30	30	30
Writing . . . . .		45	—	—	—
Cookery Practice . . . . .		75	—	135	—
Drawing . . . . .		90	75	75	75
Games or French Translation . . . . .		120	—	—	—
Scripture or Games . . . . .		—	120	120	120
Dressmaking . . . . .		—	—	45	—
Address (Ethical) . . . . .		30	30	30	30
Demonstration . . . . .		—	60	—	—
Practice . . . . .		—	75	—	—
Preparation . . . . .		45	—	—	—
Examination . . . . .		75	—	—	—
Drilling . . . . .		30	30	30	30

### Appendix G.

PARTICULARS OF THE FIRST EXAMINATION CONDUCTED BY THE CENTRAL  
WELSH BOARD OF INTERMEDIATE EDUCATION, 1897.

(Total number of Pupils examined, 5,634.)

Subject.	No. of Papers set in the Subject.	No. of Schools taking the Subject.	No. of Exercises sent in on the Subject.
English Grammar . . . . .	9	79	5,092
English Composition . . . . .	2	71	3,137
Translation from Welsh into English	2	51	494
English Literature . . . . .	16	51	1,637
History . . . . .	23	79	4,905
Geography . . . . .	20	79	4,549
Scripture . . . . .	23	69	4,769
Arithmetic . . . . .	15	79	5,443
Algebra . . . . .	15	79	4,141
Euclid . . . . .	15	79	3,481
Trigonometry . . . . .	6	25	121
Mensuration . . . . .	2	10	97
Geometrical Conics . . . . .	3	5	9
Analytical Geometry . . . . .	2	7	7
Problems . . . . .	1	8	23
Latin . . . . .	56	79	5,198
Roman History . . . . .	1	—	—
French . . . . .	47	79	6,539
Welsh . . . . .	6	31	988
Greek . . . . .	27	19	198
Greek History . . . . .	1	1	1
German . . . . .	7	10	106
Mechanics . . . . .	8	38	209
Physics . . . . .	9	22	541
Chemistry . . . . .	11	46	1,189
Botany . . . . .	8	27	671
Physiology . . . . .	4	19	325
Hygiene . . . . .	5	19	441
Biology . . . . .	1	—	—
Physiography & Physical Geography	4	11	276
Geology . . . . .	2	2	33
Domestic Economy . . . . .	4	21	427
Agriculture . . . . .	2	4	45
Book-keeping . . . . .	7	31	762
Mining . . . . .	1	1	7
	365		55,861

### Appendix H.

CENTRAL WELSH BOARD.

ANNUAL EXAMINATION, 1898.

GENERAL REGULATIONS.

1. The Examination in the year 1898 shall commence on Monday, the 11th day of July, and any Papers not taken within the week commencing on that day shall be taken on Monday, the 25th day of July, and following days.

2. Pupils admitted into the County Schools after the 31st day of October, 1897, shall not be presented for the Annual Examination of July, 1898, unless specially recommended for admission by the Head Master or Head Mistress.

3. At least half the School shall be presented for written examination in not less than six of the subjects specified in Part I. of the Schedule appended hereto, in which they shall have been taught during the year.

4. Forms not presented for the written examination will be examined orally in some or all of the subjects studied by them during the School year.

5. In addition to the Oral Examinations of the lower forms provided for in the last preceding regulations, Oral and Practical examinations will be provided in those departments in which the Central Welsh Board deem that such examinations are necessary in order to render the Annual Examination an effective test of the work done in the Schools. These departments are specified in Part II. of the Schedule appended hereto.

6. Entire classes and not a section of a class shall be presented, whether it be for Written, Oral, or Practical Examination.

7. The Head Master or Head Mistress shall, not later than the 21st day of May, 1898, forward to the Clerk of the Board—

- (a.) A complete list of Pupils exempted from the Annual Examination under Regulation 2.
- (b.) A complete list of Pupils specially recommended for examination under Regulation 2.
- (c.) A complete return of the number of copies of Examination Papers required on each stage in every subject represented in the Examination Schedule for 1898.
- (d.) A complete return of the number of copies of Examination Papers required on each Alternative Scheme to any stage in any subject represented in the Examination Schedules for 1898.
- (e.) A return of the number of copies of Examination Papers required upon any subject offered for examination, but which is not represented in the Examination Schedules for 1898.

[Forms, for the purposes of the above Returns, will reach the Head Masters and Head Mistresses not later than 7th day of May, 1898.]

#### SCHEDULE OF SUBJECTS.

##### PART I.—In pursuance of Regulation 3.

##### WRITTEN EXAMINATION.

Scripture Knowledge.	German.
English Grammar and Composition.	Mechanics.
English Literature.	Applied Mechanics.
History.	Physics.
Geography.	Chemistry.
Arithmetic.	Botany.
Mathematics.	Physiology.
Latin.	<i>Either Hygiene or Domestic Economy.</i>
Greek.	Geology.
Welsh.	Metallurgy.
French.	Agriculture.
Spanish.	Book-keeping.

##### PART II.—In pursuance of Regulation 5.

##### ORAL AND PRACTICAL EXAMINATION AND INSPECTION.

English.	Spanish.	Manual Training.
Latin.	German.	Vocal Music.
Welsh.	Natural Science.	Shorthand.
French.	Cookery.	

DRAWING.—The Chief Inspector has been requested to obtain an account of the methods of teaching the various branches of Drawing in the Schools.

## The London Polytechnic Institutes.

In the so-called "Polytechnic Institutes" London is trying an educational experiment of considerable interest, which has already achieved a remarkable success, and which promises a still more remarkable future. In London, perhaps even more than in other great cities, one of the most difficult of educational problems has been how to deal with the young men and women between 16 and 25, who have left school and are earning their livelihood during the day, but whose general culture and technical training obviously has in some way to be provided for. In the absence of any kind of compulsion, neither night-schools nor mechanics' institutes, neither boys' clubs nor evening classes, have ever succeeded in attracting more than an infinitesimal fraction of the population. The various mechanics' institutes which the energy of Dr. Birkbeck and Francis Place established in London between 1825 and 1836,\* failed to secure the adhesion of the young artisan, and, with one remarkable exception, gradually faded out of existence. The one exception, the well-known Birkbeck Institution, off Chancery Lane, after passing through vicissitudes of fortune, became a flourishing centre of evening instruction, mainly resorted to by the young clerk, and now constitutes the largest of the three branches of the City Polytechnic. The Working Men's College (1854), the City of London College (1860) and a few smaller institutes, stand out from the general failure, but themselves attracted only a tiny proportion of the whole. Even the evening continuation classes of the School Board for London, designed especially to catch the boys and girls leaving the Board School, long failed to fill, and have until lately increased with deplorable slowness. In 1880, when London contained over three-quarters of a million young people between the ages of 16 and 25, there were probably not two per cent. of the young men, and only an infinitesimal handful of the young women, enrolled in any educational institution whatsoever. The London Polytechnic Institutes are now gathering in a large and rapidly growing percentage of the young people between these ages, whether artisans or factory operatives, clerks or shop assistants.†

### WHAT A LONDON POLYTECHNIC IS.

The London "Polytechnic" has no connection with, and but little resemblance to, the institutions to which a similar name is applied in France, Switzerland, and Germany. The title springs from a mere local accident of no significance.‡ The typical London Polytechnic is an institution, under public management, for the provision of instruction, recreation, and social intercourse, for young men and women of the

\* See Mr. S. G. Godard's "George Birkbeck" (London, 1884); and Mr. Graham Wallas's "Francis Place" (London, 1898).

† See the Annual Reports of the Technical Education Board of the London County Council, especially those for 1895-6 and 1896-7 (London: P. S. King and Son).

‡ In 1880-1 Mr. Quintin Hogg acquired, for the accommodation of his rapidly growing Working Lads' Institute, the lease of the premises of the Polytechnic in Regent Street—a well-known place of popular and semi-scientific entertainment, which, after amusing and instructing youthful London for a whole generation, ceased to pay its way and had to be closed. Mr. Hogg's institute appropriated the old name.



wage-earning and "lower-middle" classes. It is an organisation of considerable magnitude, having several thousands of members or students, the vast majority of whom are between the ages of 17 and 25. Its governing body, consisting of from ten to twenty members, appointed by various public authorities, disposes of an annual revenue of five, ten, and in one case, twenty thousand pounds, in addition to the fees paid by the members and students. With these resources, a large amount of very varied work is carried on, each institution developing on its own lines, and accordingly differing in details from the others, but all alike being based on a common plan.

The London Polytechnic Institute is remarkable, if not unique, in its express and deliberate combination of social intercourse, recreation, and instruction. It is not a place of amusement with a few educational classes added; nor is it an educational institution with some provision for the students' recreation. The social intercourse of its members is as much its object as their recreation or their instruction; and all three purposes are entitled to equal attention from its governing body, and to an adequate share of its endowment. It is, in short, an institution of a special type, devised expressly to meet the demands of young men and women earning their livelihood by head or hand; separated in many cases from their relations and condemned to lonely lodgings; and all of them inhabiting a great city which has outgrown the simple social intercourse of neighbourliness.

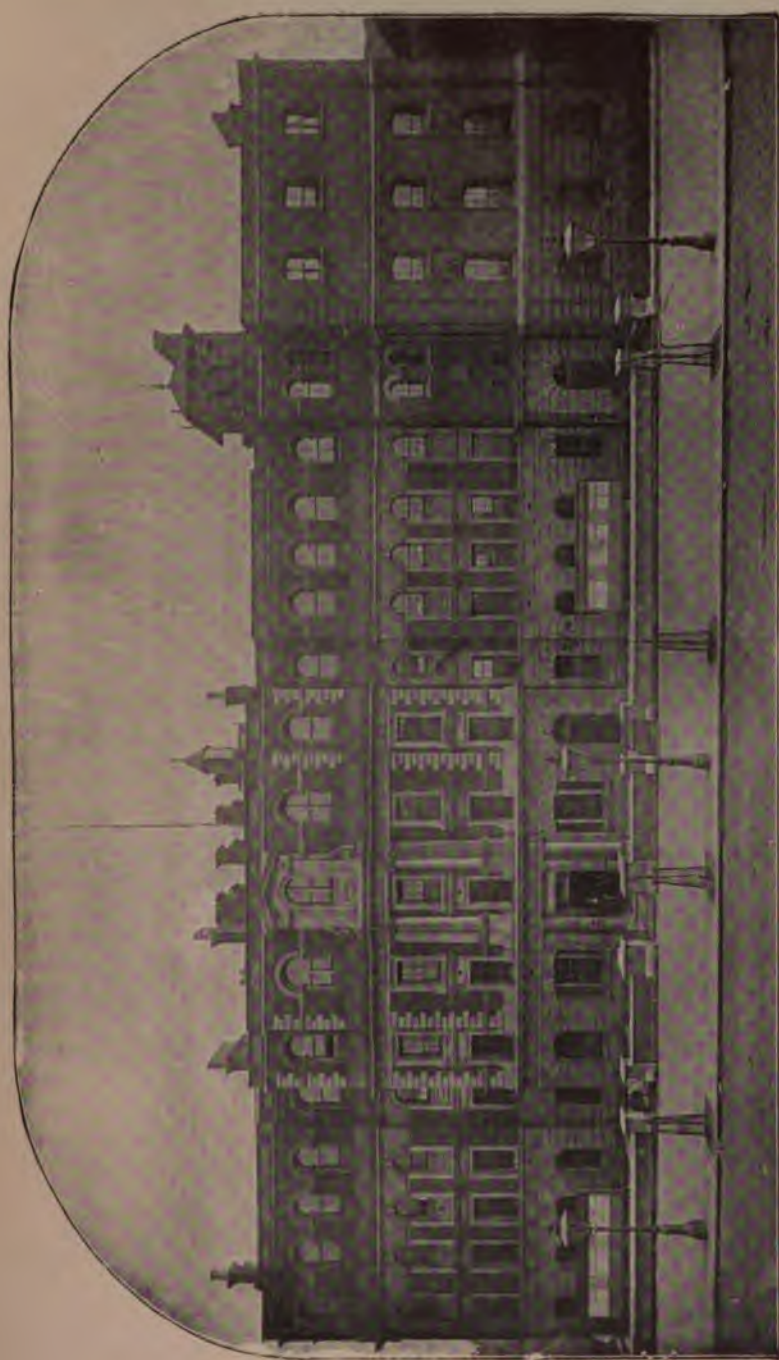
Each Polytechnic Institute is an independent organisation, not subject to control by any Government department or other authority, and free, within the limits of its own trust-deed or other constitutional document, to move in whatever direction may be determined on by its governing body. But based as they all, with one exception, are, upon schemes of the Charity Commission, they are subject, to a certain extent, to ultimate control by that body. Receiving as they do (all but two), large sums from the City Parochial Charities, they necessarily defer to any suggestions made by the trustees of that fund. As their expansion and development on the educational side has been stimulated by the Technical Education Board of the London County Council, and is rendered possible (in all but two cases) only by its large subsidies, that Board exercises a very real authority over their educational work. The technological classes are examined and subsidised by the City and Guilds of London Institute. The three latter bodies send representatives to the London Polytechnic Council, a joint committee undertaking a general supervision of all the polytechnics.

#### HOW THE LONDON POLYTECHNICS CAME INTO EXISTENCE.

The historian of the London Polytechnic movement, itself a creation of the last ten years, will trace its origin and its strength to the unforeseen combination of four distinct influences—a piece of life-long philanthropy by a City merchant; a Utopian novel; a so-called "predatory" Act of Parliament; and "the whiskey money." Let us briefly record, for a forgetful generation, how each of these influences contributed to the result.

To Mr. Quintin Hogg's patient personal work among working boys, and his munificent philanthropy, London owes the first model of a Polytechnic Institute, as well as its name. In an interesting article published in 1896,\* Mr. Hogg describes the beginning of his work

\* "Polytechnic Magazine," May, 1896; "London Technical Education Gazette," May, 1896.



(1.)—THE BOROUGH POLYTECHNIC INSTITUTE.

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among working lads—a reading lesson to two crossing-sweepers in the Adelphi arches (near the Strand). This developed successively into a ragged school (1864) in a room in Of-Alley (now York Place); a boys' home (1868) in Drury Lane; separate evening classes (1871) in Hanover Street; an evening institute (1878) in Long Acre; and, finally, from 1881 onwards, the present extensive organisation at the Regent Street Polytechnic. Here Mr. Hogg proved that, if only the opportunity for innocent recreation and useful instruction were provided without offensive patronage or irritating restrictions, thousands of working lads and young men would gladly avail themselves of it.

Meantime an impulse was given to public opinion from another direction. In 1882 Mr. (now Sir) Walter Besant described in his novel, "All Sorts and Conditions of Men," the lack of provision for social intercourse and healthful recreation among the million inhabitants of the East End of London; and sketched out the plan of a "Palace of Delight," which should supply this need. The idea seized on the public imagination, just then momentarily exercised by the condition of the sweated trades,\* and led to certain funds being supplied by a private trust and various other donors, for the foundation of such a social institute as the novelist had described. Out of this root has grown, though with many changes by the way, the present "People's Palace and East London Technical College."

But neither literary fantasy nor private philanthropy could, by themselves, have covered the whole area of London with polytechnic institutes. What gave strength and permanence to the movement, and extended it to the entire county, was the money appropriated under the City Parochial Charities Act, 1883. The growth in wealth of the 109 minute parishes which form the old City of London, and the rapid dwindling of their residential population, had drawn attention to the desirability of some reappropriation of their extensive charitable endowments. A Royal Commission reported that property producing over £80,000 a year was being to a great extent wasted or frittered away, and recommended the appointment of a special executive commission, empowered to devise schemes for the devotion of this large property to objects of utility to the whole Metropolis. The necessary Act of Parliament was passed in 1883, largely through the exertion of Mr. (now the Right Hon.) James Bryce, M.P. Under this Act the Special Commissioner (Mr. James Anstey, Q.C.), in conjunction with two Assistant Commissioners (Mr. Edward Bond, now M.P., L.C.C.; and Mr. H. H. S. Cunynghame, now Assistant Under Secretary of State for the Home Department), and with the Chief Charity Commissioner (Sir Henry Longley, K.C.B.), prepared a general scheme for the establishment, throughout London, of institutes which should combine the solid attractions which Mr. Quintin Hogg had proved to be successful at the Regent Street Polytechnic, with the social advantages which then formed the primary object of the People's Palace. One leading feature of these institutes was to be the provision of technical instruction for the manual working-class—a provision which fell in with the general trend of public opinion at the time—but the education to be supplied was to be in no way limited either as regards the subjects to be taught or the height to which the instruction was to be carried. It was, however, not proposed that these institutions should be established entirely from the funds drawn from the City Parochial Charities. A large proportion of capital, and an endowment of

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\* See the "History of Trade Unionism," by Sidney and Beatrice Webb (London, 1894).



annual income—the whole amounting in capital and annual endowment approximately to a million sterling—was offered to London for this purpose, conditionally upon other funds being provided in each locality by private subscription. This offer met with a liberal response. The Drapers' Company took over the People's Palace, and set aside a large income for its maintenance. The Goldsmiths' Company undertook the entire charge of founding and maintaining a polytechnic at New Cross. The Clothworkers' Company gave munificent donations (nearly £18,000) to the Northern Polytechnic at Islington, and other City Companies helped in their own way. Largely through the energy of Mr. Evan Spicer and the special generosity of Mr. Edwin Tate, considerable sums were raised in Southwark and Battersea for starting polytechnics in those districts. In Clerkenwell and in South-West London similar schemes began to get under way. But except in the two cases in which City Companies had undertaken the entire charge, the available funds were everywhere found to be quite insufficient for the maintenance, and in some cases even for the completion, of the institutions which had been begun.

At this stage the London County Council entered the educational field, and began in 1892-3 to devote its "whiskey money" [the grant from the National Exchequer made in the Local Taxation (Customs and Excise) Act of 1890] to the promotion of Technical Education. The polytechnic institutes, then in various stages of incompleteness, naturally claimed a large share in this new source of educational endowment. This has been liberally accorded to them by the Technical Education Board (the committee to which the Council delegated its educational functions), but only upon condition that the educational side of each institute was systematically organised upon a sound footing, made thoroughly efficient, and greatly extended. Under this influence, the polytechnics, whilst retaining their functions of promoting social intercourse and healthful recreation, have become educational institutions of the first importance.

#### THE LONDON POLYTECHNICS IN 1898.

At the present time there are eleven polytechnic institutes and four branches actually at work, distributed as follows:—

##### NORTH OF THE THAMES.

The People's Palace and East London Technical College, Mile End Road, E. (With its branch, the Bow and Bromley Institute.)

The Northern Polytechnic, Holloway, N.

The Regent Street Polytechnic, Regent Street, W.

The South-West London Polytechnic, Manresa Road, Chelsea, S.W.

The City Polytechnic, comprising

The Northampton Institute, Clerkenwell.

The Birkbeck Institution, Bream's Buildings, Chancery Lane.

The City of London College, White Street, Moorfields.

##### SOUTH OF THE THAMES.

The Battersea Polytechnic, Battersea Park Road, S.W.

The Borough Polytechnic, Borough Road, S.E. (With its two branches, the Herold's Institute, Bermondsey, S.E., and the Norwood Institute, Knight's Hill, S.E.)

The Goldsmiths' Institute, Lewisham High Road, New Cross, S.E. (With its branch at Sayes Court, Deptford, S.E.)

The Woolwich Polytechnic, William Street, Woolwich, S.E.

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(2)—GIRLS' CLUB ROOM AT THE BOROUGH POLYTECHNIC INSTITUTE.



A twelfth is in course of establishment at Aldgate (the Sir John Cass Institute); and yet another may eventually be established in St. Pancras. The fifteen separate institutions and branches actually at work during the session 1897-8 may be estimated to have cost at least half a million sterling in capital outlay, and to be expending this year about £130,000 upon a membership which will probably approach 50,000. The receipts from members' and students' fees, and other miscellaneous sources, will not exceed £30,000, leaving a deficit of about £100,000 to be met from other funds. Private subscriptions may amount to £10,000. The contributions of the City Companies (principally the Drapers', Goldsmiths', and Skinners') will account for about £20,000 more. But at least £70,000, or about two-thirds of the net cost of the work, is drawn from funds of a definitely public character. The Science and Art Department grants will probably reach £10,000. The Central Governing Body of the City Parochial Charities contributes altogether about £30,000. Finally, the London County Council, through its Technical Education Board, supplies £30,000, definitely allocated to the part of the work falling within the statutory definition of technical instruction.

#### THE SOCIAL AND RECREATIVE WORK OF THE POLYTECHNICS.

On their social and recreative side, the polytechnics constitute an important advance in the systematic organisation of recreation in a great city. In every polytechnic institute the club rooms for men and women respectively, the concerts and entertainments of various sorts, the popular lectures and excursions, form a leading feature. Well-equipped gymnasia and playing fields, billiards and other games, reading rooms and lending libraries, as well as mutual societies of all kinds (debating, essay, Shakespeare, swimming, rambling, cycling, cricket, rowing, photography, and what not) enrol tens of thousands of members. This part of the work is less costly to the institutions than science laboratories and skilled tuition, but it absorbs in the aggregate no inconsiderable sum of the endowments. It is to this part of the expenditure that (besides the members' fees, and the private subscriptions) part of the contributions from the City Parochial Charities Fund are regarded as contributing, leaving the Science and Art Department and County Council grants to be devoted exclusively to education.

No city in the world has made such strides as London in the public organisation of pleasure. It does not, it is true, maintain or subsidise municipal theatres or opera houses, as is done in some foreign countries, and in our own Crown Colony of Malta. But now that the large public expenditure on reading rooms and libraries, parks and open spaces, gymnasia and playing fields, is supplemented by the £7,500 a year spent out of the rates for a municipal band and free open-air concerts, and by the deliberate organisation of social intercourse and amusement under public management from the endowments of the polytechnics, the organisation of pleasure has, with the full approval of public opinion, evidently become an important branch of municipal administration. The total expenditure on these various services in London from public funds alone must now reach nearly a quarter of a million a year.



## THE EDUCATIONAL WORK OF THE POLYTECHNICS.

But it is rather the educational work of the polytechnics than their recreative side, that falls to be described here. As educational institutions, the London Polytechnics constitute a new and distinct type, in that their work is not confined to any one grade—still less to any one branch of knowledge or to any one sex—but ranges from the “Upper Standard” Day School for boys and girls of 13, up to high University instruction and post-graduate research. It is now possible, in several of these institutions, for a boy or girl to enter after passing the Fifth Standard at the Public Elementary School; to remain in the Polytechnic Day School up to 16 or 17; on leaving school at any age, to continue education in any branch of study, in either evening or day classes; to prepare either for manual labour, commerce, the higher ranges of technical science, or the classical curriculum of the University; to qualify for membership of the professional associations or take a London degree; and finally to specialise, in post-graduate investigation or research, in any department of science, literature, or art. From the beginning to the end of the career of such a student, he or she may remain at one and the same institution, studying either in the daytime or in the evening, as may be most convenient, and passing from teacher to teacher, under the personal influence of one and the same principal. The visitor who goes over one of the larger and more highly developed polytechnics will find within the institution on the day of his visit all kinds and grades of educational work simultaneously going on. In one room he will see boys of twelve learning arithmetic, or girls of thirteen being taught to sew; in another wing of the same building he will come across classes of plumbers or bricklayers, compositors or tailors, receiving practical training in the processes of their respective crafts; close by will be seen the smithy or the fitting shop, crowded with young engineering artisans; in other class-rooms he will find groups reading Dante, or studying economics; and presently he will enter a splendidly equipped physical or chemical laboratory, where he may discover (as at Battersea this year) the professor, with a selected band of students working out a Royal Society grant for original research, or (as at the South-West London Polytechnic) graduates of more than one University preparing their theses for the doctor’s degree. The typical London Polytechnic does not belong exclusively to elementary, to secondary, or to university education; it is not distinctly a day college, nor yet an evening institute; it is particularly affected neither to science nor to the arts, neither to technology nor to literature. Its remarkable growth and success is due to the fact that it combines and includes them all.

It has sometimes been suggested that the London Polytechnics, in undertaking educational work of wide range and high quality, have departed from their legitimate sphere. This is not the case. The original “scheme for the management of an Industrial Institute,” by which the polytechnics are practically all governed, was wisely drawn in very general terms. The “general knowledge” of the students is placed alongside their “industrial skill,” among the declared objects of the institution, and to both of these are added the all-embracing words of “health and well-being.” The governors are to supply “instruction in the general rules and principles of the arts and sciences applicable to any handicraft, trade, or business,” but co-ordinate with this is the direction to give “instruction in such other branches and subjects of

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THE GIRLS OF THE  
SCHOOL

(b) LAUNDER, CLAS. BY THE MARSHAL POLYTECHNIC CENTER.







(3.)—LAUNDRY CLASS AT THE BOROUGH POLYTECHNIC INSTITUTE.

art, science, language, literature, and general knowledge as may be approved by the governing body."

The "institute shall be conducted in such a manner as to secure the benefits thereof to the poorer classes," but there is no limit or restriction on the quality of the instruction to be provided for students of such "poorer classes"—an expression to be understood in the light of the regulations of the Science and Art Department, which confines its grants to persons whose incomes do not exceed the limit of Income Tax Abatement, namely, £500 a year.\* Provision is, indeed, distinctly made in the scheme for the holding of "advanced classes for higher instruction in any special branch of the subject of art, or science, or commercial, or general knowledge." The idea that the polytechnics are departing from the scheme in undertaking anything but trade classes, or providing any but elementary education, is therefore entirely without foundation. It is probable, indeed, that the extreme many-sidedness which is now such a distinctive feature of these institutions was not fully foreseen by any one of their founders. But it is just because they have been able to expand in all directions in response to the public demand that they have achieved a larger measure of success than any other kind of educational institution, without compulsory powers, has ever attained in London.

The educational work of the typical polytechnic comprises the following different departments:—

### I.—THE DAY SCHOOL.

Six of the polytechnics now possess day schools, two of them being "mixed schools for boys and girls," one having separate departments for the sexes, and three being at present confined to boys. One (at the Regent Street Polytechnic) is a secondary school, not differing essentially from the modern "second grade" type, with scientific and "commercial" leanings; the others (at the People's Palace, and at the Battersea, Borough, South-West London, and Woolwich Polytechnics) are rather of the nature of technical continuation schools, aiming at giving to boys and girls coming from the public elementary schools two or three years' educational training, specially adapted to workshop or office life. The six polytechnic day schools have at present about 1,600 pupils, the great majority of whom are between twelve and fifteen years of age.

### II.—THE DOMESTIC ECONOMY SCHOOL.

Attached to various polytechnics there are also seven day schools of a special type. The Domestic Economy School supplies to girls of thirteen or upwards, on their leaving the public elementary school, six or twelve months' continuous training in the various branches of domestic economy. The whole time of the pupil at the Domestic Economy School is spent in the study and practice of cookery, dressmaking, plain needlework, laundry work, and housewifery, with some elementary lessons in the chemistry of food, and the physiology of hygiene. These schools are restricted to small numbers, either fifteen, thirty, forty-five, or at most sixty, in order that the work may be strictly practical, and shared

\* It may be noted that Mr. Charles Booth found that, of the 4½ millions in London, 3½ millions belonged to the "no servant" class.

among all the pupils. The girls naturally do all the cooking, sewing, and cleaning work of the schools, and receive their meals and the articles of clothing they produce. One school in a specially poor neighbourhood (at the Borough Polytechnic) is open only in the afternoon, so as to allow the morning to be spent in home duties. About 500 girls pass through these schools every year. At the South-West London Polytechnic there is also a Training School for Servants, into which the pupils of the Domestic Economy School may pass, and which is also attended by adults.

### III.—THE TRADE CLASSES.

Probably 5,000 workmen, including apprentices and improvers, are to be found in these classes during the present session at the polytechnics alone, in addition to the large number of workmen in the classes for general education. Considerations of space prevent more than the following bare list of the trade classes:—

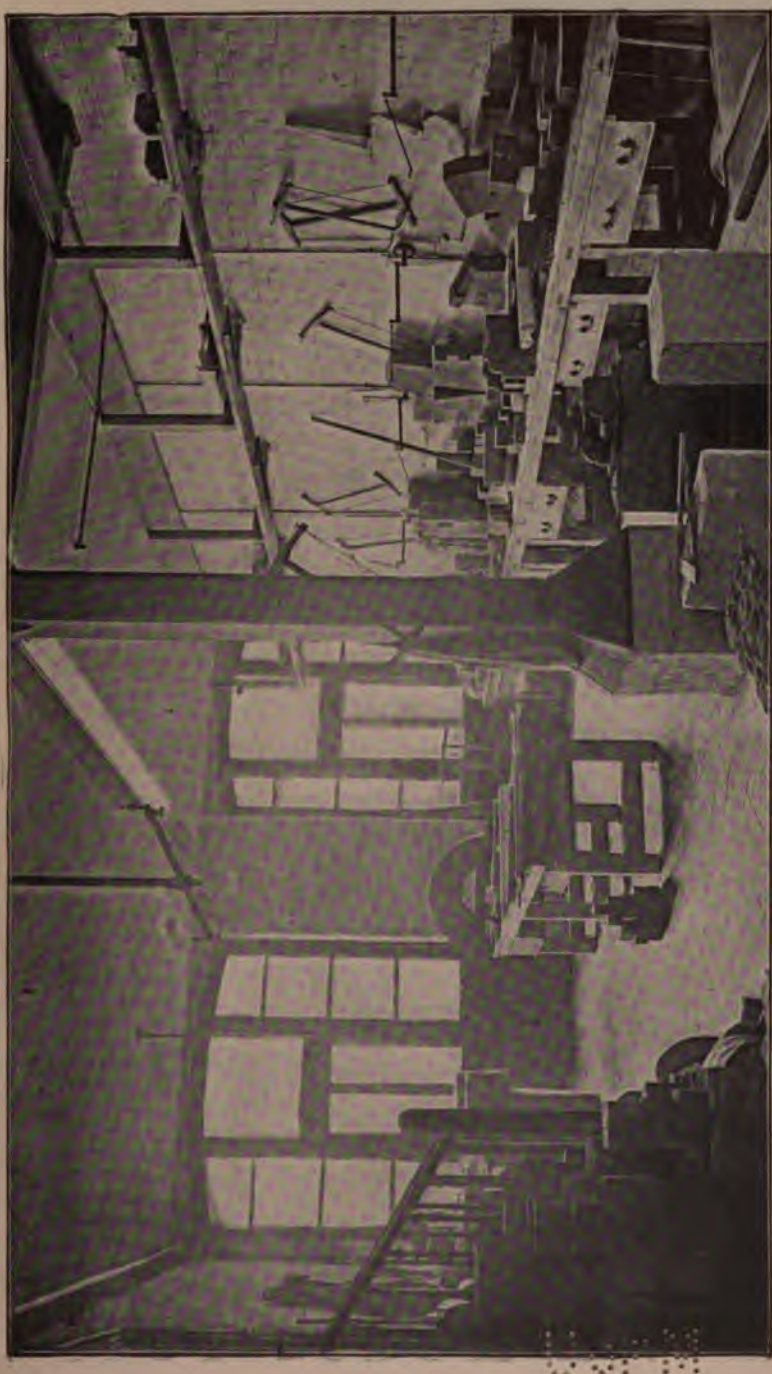
#### BUILDING TRADES.

Brickwork and Brick-cutting.  
 Builders' Quantities.  
 Building Construction.  
 Carpentry and Joinery.  
 Masonry and Stone-carving.  
 Painters' and Decorators' Work.  
 Plastering.  
 Plumbing.  
 Staircasing and Handrailing.  
 Workshop Arithmetic.  
 Workshop Drawing.

#### ENGINEERING AND METAL TRADES.

Bicycle Making and Repairing.  
 Electrical Fitting.  
 Electrical Instrument Making.  
 Electric Lighting.  
 Electroplating.  
 Enamelling.  
 Engineering.  
 Goldsmiths' Work.  
 Machine Construction and Drawing.  
 Mechanics.  
 Metallurgy.  
 Metal Work.  
 Steam.  
 Telegraphy.  
 Watch and Clock Making.



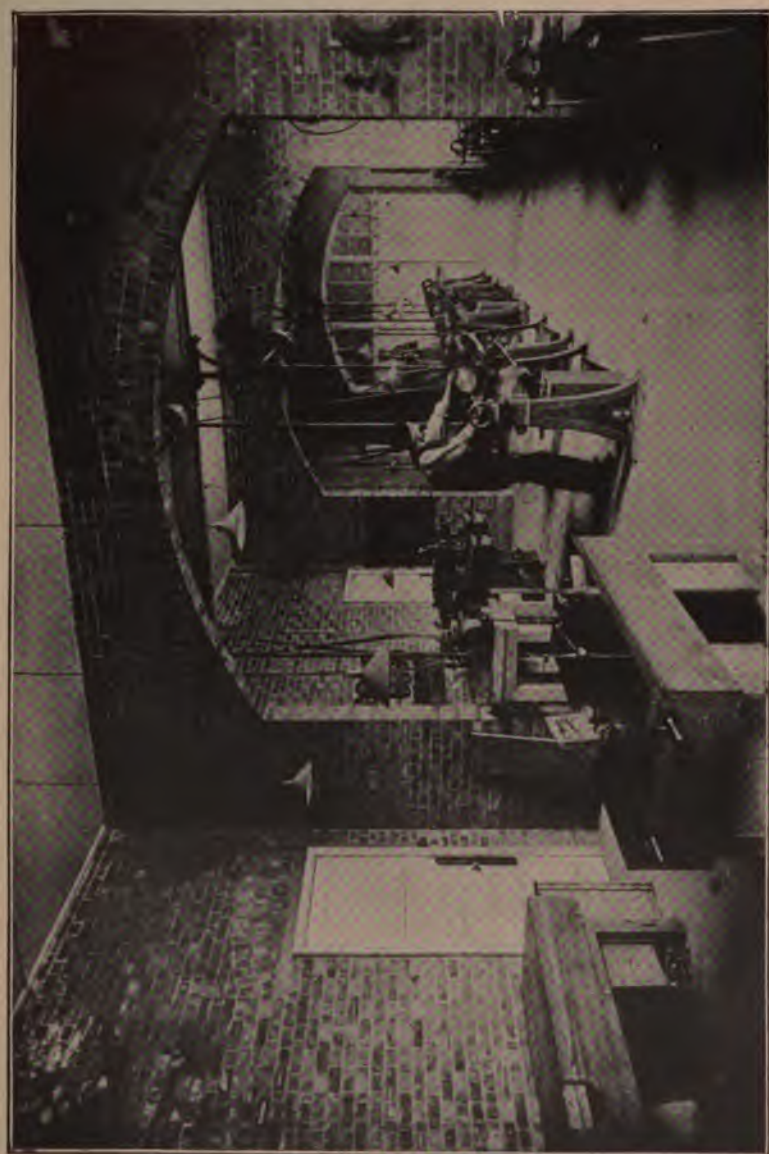


(4.)—BRICKWORKERS' SHOP AT THE BOROUGH POLYTECHNIC INSTITUTE



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(5.)—ENGINEERING WORKSHOPS AT THE SOUTH WEST POLYTECHNIC INSTITUTE.

FURNITURE TRADES.

Cabinet Making.  
Carriage Building.  
Furniture Design.  
Stained Glass Work.  
Upholstery.  
Wood Carving.  
Wheelwrights' Work.

BOOK AND PRINTING TRADES.

Bookbinding.  
Collotype.  
Electrotyping and Stereotyping.  
Engraving.  
Lithography.  
Photography and Photo-process.  
Typography and Letterpress Printing.

CLOTHING TRADES.

Art Needlework and Embroidery.  
Artificial Flower Making.  
Boot and Shoe Manufacture.  
Dressmaking and plain Needlework.  
Leather Dyeing.  
Millinery.  
Tailors' Cutting.  
Tanning.

MISCELLANEOUS TRADES.

Baking.  
Basket Making.  
Gas Manufacture.

As an example of the scope of these trade-classes, and of the spirit in which they are conducted, the following syllabus of a course at the Northampton Institute, on "Applied Physics for Instrument Makers," may usefully receive attention:—

APPLIED PHYSICS FOR INSTRUMENT MAKERS.

In this course instruction will be given in Heat, Optics, and Electricity, with a view to the design and construction of various electrical and other scientific instruments. Lectures will be given in the above subjects, combined with laboratory work in illustration of the lectures, and on one evening per week instruction will be given in the Instrument Making Workshop, under the superintendence of a trained mechanic, in the actual design and construction of Instruments, which will be selected with the object of illustrating as many as possible of the fundamental scientific principles of instrument design.



## SYLLABUS OF SECTION A.

Length, mass, time, velocity, and acceleration, and their measurement, with reference to measuring machines, balances, chronographs, and various other measuring instruments. The simple laws of heat, and their application to thermometers, calorimeters, and compensating mechanisms. The elementary principles of reflection and refraction of light, illustrating the action of mirrors, prisms, and lenses, telescopes, microscopes, spectroscopes, photometers, etc. The laws of electric currents, with their application to measuring instruments, such as galvanometers, ammeters, voltmeters, wattmeters, ohmmeters, supply meters, resistance coils and boxes, and condensers. The construction of switches, switchboards, and resistance frames, for various purposes.

In the *workshop*, the students will be divided into groups of two or three, and to each group will be assigned the design and construction of some form of measuring instrument, under the supervision of the instructor and mechanic. There will be special facilities for practical optical work.

## SYLLABUS OF SECTION B.

More detailed instruction in the design, construction, calibration, etc., of the instruments mentioned in the syllabus of Section A, and of more complicated instruments, cathetometers, theodolites, levels, sextants, telemeters, and other surveying instruments; dispersion, achromatic and aplanatic combinations of lenses, interference and diffraction, with application to direct vision spectroscopes, etc. The measurement of refractive indices, and the actual calculation of lens combinations will be given. In electricity: The laws of electromagnetism and electrostatics, as applied to measuring instruments, and the consideration of more complicated and accurate apparatus, with the methods for its adjustment.

In the *workshop*, the students will be divided into groups of two or specially selected with a view of illustrating the subject as far as possible, and they will adjust and standardise these instruments in the laboratory, by actual commercial methods, against the more approved forms of standard instruments.

Along with this may be read the syllabus for the classes in carpentry at the same institute:—

## CARPENTERS' SHOP.

This shop is equipped with a band saw having a fence for straight sawing, two wood turning lathes, a moulding spindle, all electrically driven; besides a complete kit of hand tools for all classes of carpenters', joiners', and pattern makers' work.

The students will be divided into groups, according to their ability. The general work of the classes will include:—

*Section A.*—The tuition needed by apprentices and others who have commenced work in the Carpentry and Joinery, Cabinet Making, Coach-building, and other wood-working trades. The workshop practice will be supplemented by oral tuition on the nature and properties of timber, the use of geometrical methods in setting out work, and such other subjects as may be deemed necessary. The soft and hard woods commonly

used in carpentry and joinery; seasoning and conversion of timber; names, uses, and management of woodworking tools; sharpening and setting various tools; the use of glue, nails, screws, wedges, keys, tongues, pins, dowels, tree nails, screw-bolts, and other fastenings; marking out and cutting up stuff; face and edge planing; gauging and striking joints; striking simple mouldings; operations of carpentry and joinery, technical terms; grooving, ploughing, rebating, mortising, and tonguing; mitres; shooting; dovetailing, clamping, housing, blocking, and bracketing; match boarding; furring and fillets; heading joints; veneers; inlaying and parquetry; plugs and battens; scribing; bevelling, and splaying; wedging, throating, raking, and framing; paring straight and curved surfaces; oblique and tusk tenons; construction of carpentry joints; lapping, fishing, scarfing, tabling, halving, notching, cogging; joggles, bridles, and straps; description and methods of fixing various kinds of locks, hinges, and window fasteners, floor hinges, door springs; door and gate swing and slide arrangements.

Construction of doors, tables, cupboards, desks, and plain furniture.

Descriptions of wood-working machinery; vertical, circular, cross-cut and band saws; planing, moulding, mortising, tenoning, and boring machines; universal joiner and spindle machines.

*Section B.*—Intended to suit the requirements of journeymen and adult artisans who have had a fair degree of workshop experience. The practical work taken will be correlated to Section 13 of the Workshop Drawing Class for wood workers; the working drawings prepared in that class being intended for actual construction in the shop. The syllabus for workshop drawing may be taken as a sufficient indication of the course in contemplation.

*Section C.*—More difficult and highly-finished work than that taken in the preceding section; it will in general correspond with the work of the advanced drawing for wood-workers.

All necessary tools and wood will be provided by the Institute; but the students will be responsible for any breakages.

#### IV.—THE GENERAL CLASSES IN SCIENCE, LANGUAGES, ETC.

Here again we have a bewildering array of classes at all the polytechnic institutes, ranging from the elementary French, shorthand and book-keeping of the ambitious office boy, or the rudiments of geometry and electricity picked up by the artisan, to the highest "verbatim reporting practice," commercial correspondence in German and Spanish, and the study of law or political economy. In these classes the industrious apprentice or enterprising mechanic prepares himself to become a foreman or clerk of the works; here the diligent errand boy and junior clerk begins his progress towards a partnership or setting up for himself; here the clever girl from the Board School studies for a Post Office clerkship, or learns, in dressmaking and millinery classes, how to make the best of a small income; here the weary but indefatigable shop assistant struggles to pick up colloquial French—in short, it is in the evening classes of the polytechnics and the smaller educational institutes that fill up the interstices between them,\* that the 100,000

\* The limits of this article forbid more than a bare mention of these smaller institutes, which are doing most useful work. Among the most interesting are the Working Men's College (established 1854) and Toynbee Hall, both of which aim primarily at general culture; the Morley Memorial College, the Westbourne Park Institute, the Queen's Park College and

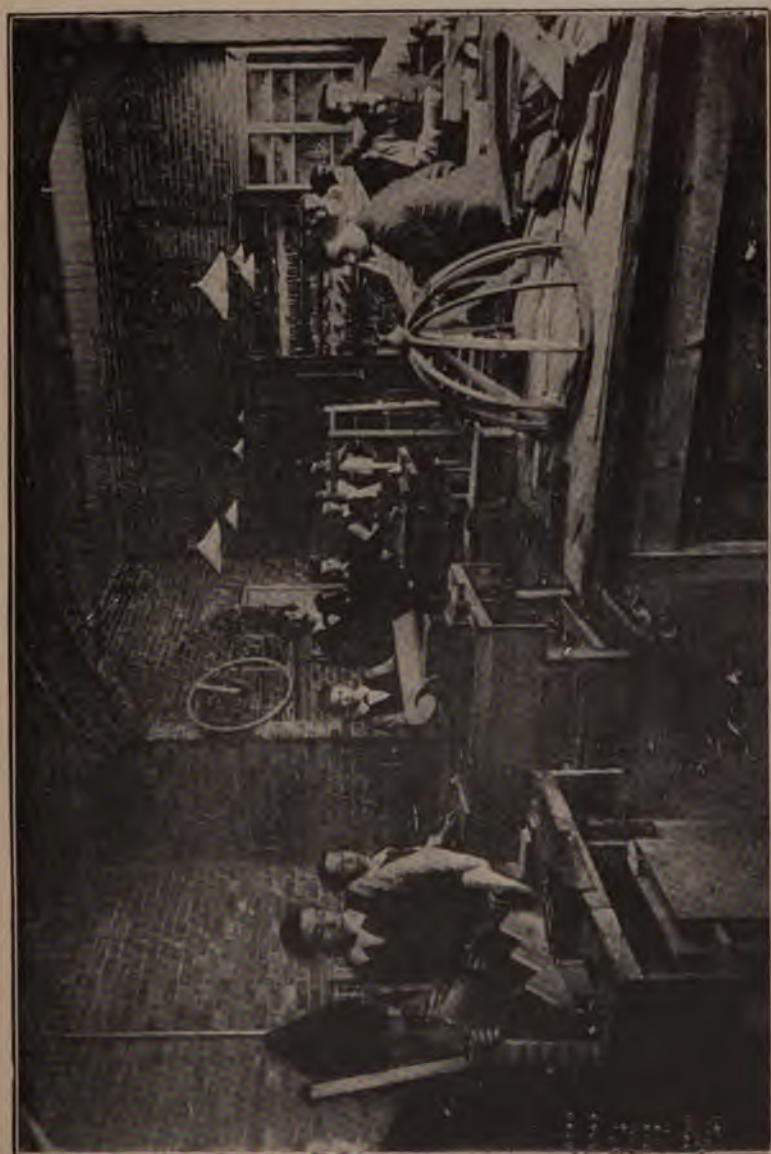
young men and women who each year attain their twenty-first birthday in London get their main chance of anything beyond the commonest of common schooling.

## V. THE TECHNICAL COLLEGE.

But it is a mistake to regard the polytechnics as exclusively, or even mainly, devoted to evening classes. In most of them, the buildings are now coming to be almost as much thronged in the morning and afternoon as in the evening. Nor is this due merely to the day schools for boys and girls and the domestic economy schools already described. There are in London thousands of people who earn their daily bread by working in the evening, or even through the night. Other thousands, such as young women occupied with home duties, visiting governesses, teachers in evening classes, and many more, can more conveniently spare part of the day than the evening hours. Finally, London contains a large student class—young men and women, mostly living at home, and devoting themselves for a few years to artistic or intellectual study. Accordingly one polytechnic after another has found itself pushed into providing day instruction of various kinds, by the demand of students for whom evening classes are inaccessible or unnecessary. Thus the Battersea Polytechnic has regular day courses in mathematics and science, building and machine construction, wood-work and metal-work. The East London Technical College and the Regent Street Polytechnic have each a regular engineering department, involving attendance for thirty hours per week, at a course of instruction extending over two or three years, which turns out fully equipped engineers and electricians. The Regent Street Polytechnic has just started an Architectural School, providing a complete curriculum for young architects, sons of builders intending to enter their fathers' business, and others able to devote two or three years to daily study. The Goldsmiths' Institute, besides extensive day departments in art and music, has a "Commercial and Civil Service" department every afternoon, largely attended by young women. The Birkbeck Institution has now a rapidly growing day department in natural science, including systematic courses in mathematics, physics, chemistry, biology, and physiology, under well-qualified teachers, and using the splendid laboratories of the institution. There are also day classes in Latin, Greek and French, up to the standard of the B.A. degree. It is, however, at the South-West London Polytechnic that the day classes have been most fully organised. Besides a day school for boys and girls, a Domestic Economy School for girls, developing at one end into a Training School for domestic servants, and a flourishing Art School, there is a fully developed Technical Day College for men, and another for women. The former has been modelled upon the well-known Finsbury Technical College of the City and Guilds of London Institute, and provides for youths between 15 and 18, a two-years' course of training for the

Institute, the Westminster Technical Institute and the Wandsworth Technical Institute, all of which are virtually minor polytechnics; the St. Basil's Institute, the Rolt Cent. Lithographic and Photo-process School, and the Shoreditch Municipal Technical School, which are rather more of the nature of "mono-technical" institutes, specially devoted to particular industries; and the "B." and School of Arts and Crafts, the Camberwell School of Arts and the Technical Education Board, and eleven others (as, indeed, are all the other institutions) of some authority.





(C.)—DAY SCHOOL CLASS IN MANUAL INSTRUCTION AT THE SOUTH WEST LONDON POLYTECHNIC INSTITUTE



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mechanical engineering, (2) electrical engineering, (3) chemical industry, (4) the building trades, or (5) applied art. There is an entrance examination for all matriculated students, who pay an inclusive fee equal to that charged by many a provincial University College, namely, £15 per session. The day college for women is for students of 15 years of age and upwards, and corresponds, as far as may be, with the men's college. The courses provide a good general education in science, art, literature, domestic economy, and physical training, the inclusive fee for matriculated students being, as for the men, £15 per session.

There is an obvious economy in utilising for day as well as for evening work the expensive buildings and equipment provided, at a cost of over £500,000, for these polytechnic institutions. Taken as a whole, indeed, the day work involves no pecuniary burden on their annual funds, as the extra expense for staff and maintenance is fully covered by the fees charged. There are, moreover, many advantages to an evening institution in having a day department. The standing charges are spread over a larger volume of work. The combination of day and evening classes permits the payment of higher salaries to be made to the staff, and enables the services to be secured of more distinguished teachers than would be attracted by evening work alone. And there is a positive educational advantage in the union of an engineering or an architectural school, conducted in the daytime, with the ordinary trade classes, which are necessarily held in the evening. It is a great gain to the young architect or engineer to be able to pass, whenever he pleases, into a workshop class where, side by side with the artisan, he will learn the ordinary practical work of a carpenter or a plumber, a stonemason or a plasterer, a smith or a fitter. Hence the engineering and architectural schools of the London Polytechnics are steadily increasing. More than one provincial city, proud of its "University College," counts fewer systematic day students than a single London Polytechnic.

#### VI.—THE ART SCHOOL.

The School of Art is an important department of every polytechnic institute. Its work ranges from the elementary drawing, which every technical student is urged to learn, up to the highest developments of "fine art" and design. Largely attended "life classes," wood-carving, modelling, art needlework and embroidery attract, in the aggregate, nearly three thousand students, day and evening. The polytechnics are providing, in fact, more than a third of the art teaching of London. In the National Art Competitions, several of the London Polytechnics usually stand at the very top of the list of successful art schools. Some of their works now appear in every exhibition of the Royal Academy—still more in every Arts and Crafts Exhibition held by the Artworkers' Guild. The students of the Goldsmiths' Institute, in particular, have distinguished themselves in every branch of art.

#### VII.—A NORMAL SCHOOL FOR TEACHERS.

The number of teachers, elementary and secondary, employed in London, does not fall far short of 20,000, and probably between one and two thousand new appointments are made each year. An extensive recruiting ground for educational institutions in London exists

therefore among teachers alone. A large number of them are now to be found in the ordinary day or evening classes of the polytechnics, improving their French, increasing their science certificates and acquiring the "full D," (the elementary teacher's drawing qualification). A beginning has, however, been made of proper normal classes for teachers, having in view a real educational training in method rather than the mere acquiring of certificates.

Mention must first be made of the Domestic Economy Training School, carried on by the Battersea Polytechnic. This is a fully equipped normal school, recognised by the Education Department for the training of women teachers in cookery, needlework and dress-making, millinery, laundry work and housewifery. The full course lasts two years, for which an inclusive fee is charged of £45, covering besides two years' tuition, meals during school hours, and the articles of clothing made up. The Technical Education Board, at whose instance the school was established five years ago, nominates a certain number of free scholars between the ages of 18 and 30.

Several of the polytechnics, notably Battersea and the South-West London, have on Saturday mornings well-attended normal classes for teachers. Thus, at Battersea this session, there are courses on "The Teaching of Practical Mechanics" and "The Teaching of Practical Physics," as well as regular instruction for teachers in manual training, drawing, etc.; whilst the Borough Polytechnic, besides very successful woodwork classes, has a special Saturday morning course for domestic economy teachers, on "The Chemistry of Cooking." For these normal classes in science teaching the spacious laboratories of the polytechnics are admirably suited.

### VIII.—THE SCIENCE LABORATORIES.

But the science laboratories of the polytechnics require a paragraph to themselves. The generous donations of the Drapers' and Goldsmiths' Companies, and the equipment grants of the Technical Education Board, have endowed London with a series of chemical, physical, and mechanical laboratories, which go far beyond the requirements of merely elementary students, and which will, indeed, bear comparison with any others in this country. Every attempt is made to render even the elementary instruction in chemistry, physics, and mechanics thoroughly practical and scientific. The great majority of the students naturally do not pass beyond this stage. But out of the thousands of young men and women who throng the polytechnics a small proportion show taste and aptitude for scientific work of a higher order, and devote themselves to advanced studies. Accordingly nearly every polytechnic has its little band of enthusiastic chemists or electricians, who spend every hour that they can spare in the laboratory, and who, working under the personal guidance of the able scientists at the head of these departments, are carrying on original investigations. Sometimes this is systematised into what, in a German University, would be called a "Seminar." Thus, at the South-West London Polytechnic, there was announced for the current session the following classes for "training in research," under the principal (Mr. Tomlinson, F.R.S.):—

RESEARCH COURSES AT THE SOUTH-WEST LONDON  
POLYTECHNIC.

*(a) Course for day students.*

This research training will form part of the curriculum of the second year day electrical engineering students of the institute, but will be open to a limited number of other students provided they can show a fair knowledge of the elementary principles of physics and mathematics. The method of conducting any research will be as follows—

1. The principal will select some subject for investigation suitable for electrical engineering students.
2. He will fully explain to the class the various reasons which have induced him to make the selection.
3. He will give a brief history of what has been previously done round and about the subject, and full reference thereto.
4. He will propound a mode or modes of attacking the research and invite criticisms from the class.
5. When the best mode of attack has been decided on, the class will be expected not only to take part in the experiments but to help in preparing the required apparatus.
6. Should the results obtained be of sufficient importance, they will be offered in the form of a paper to such societies as the Royal Society, the Physical Society, or the Society of Electrical Engineers.
7. From time to time during the investigations the principal will give demonstrations or lectures on those particular branches of magnetism and electricity which bear directly on the investigation, and will illustrate them by the results obtained.

The subject selected for the first research is "The Effect of Repeated Heating on the Magnetic Permeability and Electrical Conductivity of Iron and Steel."

The investigations will be accompanied among others by the following demonstrations and lectures—

- (1) The best methods of annealing iron and steel and the faults incidental thereto.
- (2.) The determination of magnetic permeability both by the ballistic and magnetometric methods.
- (3.) The determination of the electrical conductivity of magnetic metals.
- (4.) The critical temperature of iron and its alloys.

These demonstrations and lectures will be complete in themselves, and may be attended by those who are not capable of taking any practical part in the research.

The principal will be glad to give further information to intending students.

*(b) Saturday morning course for teachers.*

On Saturday, October 10th, Principal Tomlinson, F.R.S., will commence a course of demonstrations in research training. The course will be essentially a practical one. An electrical subject for research has already been selected, and in this each member of the class will



participate, not merely by performing the experiments, but by assisting to make up the necessary apparatus. Should the results of the investigations prove of sufficient importance, they will be offered for publication to one of the societies interested in the subject. In any case, such a course should prove valuable to the more intelligent teachers, both in elementary and secondary schools, and accordingly ten such teachers will be admitted free of charge, provided they show the necessary qualifications. The class will hold about 30 meetings on Saturdays from 10 a.m. to 1 p.m., and an opportunity will be given to those who desire it of continuing their experiments from 2 p.m. to 5 p.m.

#### IX.—THE PEOPLE'S UNIVERSITY.

Among the 50,000 members and students of the London Polytechnics there are many who aspire to a University degree. A considerable number present themselves every half-year for the London matriculation examination, and many pass it with no more special preparation than is to be obtained from the ordinary classes at the polytechnics. But a demand has sprung up for courses of instruction definitely adapted to the requirements of the B.A., B.Sc., and LL.B. degrees. With the possible exception of the Borough Polytechnic and the newly opened Northampton Institute, every London Polytechnic now finds itself compelled to make express provision for students who are working for University degrees. In the annual report of the Technical Education Board for 1896-7, it was mentioned that, in science alone, there were at least one hundred matriculated students in the polytechnics, who were known to be definitely studying for the London degree. Several of the older institutions, notably the Birkbeck branch of the City Polytechnic, have already taken an honourable place in the London University pass and honour lists. At least a dozen of the degrees conferred by the London University last year were on Polytechnic students.

#### THE PLACE OF THE POLYTECHNICS IN THE LONDON EDUCATIONAL SYSTEM.

The success of a few polytechnic students in taking London degrees does not, of course, mean that these institutions can ever take the place of a University; any more than their special experiment in Technical Day Schools can supply the need for Secondary Education of the ordinary type. The London Polytechnic is, in short, a pure addition to the educational system, which neither competes with previously existing institutions, nor supersedes them. It is a fact to be regretted that, taken as a whole, neither the London University Colleges nor the London Secondary Schools exhibit at present any signs of growth. Whether this stagnation is due to one cause or to another is a matter of controversy. But there is no reason to believe that it is in any way connected with the remarkable upgrowth of the polytechnics. There are, among all the 50,000 members and students of these new institutions, probably not a dozen who would have been found joining University or King's College had the polytechnics never come into existence. Their Technical Day Schools have in no way diminished the numbers of the ordinary Secondary Schools. Each new polytechnic seems in fact to create its own public, and though five out of the eleven main institu-

tions, and three out of their four branches, have been opened since 1893, the numbers attending the older ones positively go on increasing each year. It is only natural that educational institutions of other types should look with longing eyes on the tens of thousands of new students whom they have failed to attract. But there is every indication that the 50,000 members and students thus brought under educational influence are a net gain: they represent the arrival of a poorer class of students than the University Colleges have as yet catered for.

Similarly, the London Polytechnics leave untouched the place of the "monotechnic" institute, devoting itself to specialised instruction and research in one particular department. The School of Lithography and Photo-Process Work, which the Technical Education Board carries on at Bolt Court, Fleet Street, finds no competitor in the polytechnics; its Central School of Arts and Crafts at Regent Street neither diminishes the attendance at the other Schools of Art, nor itself suffers from them. The Central Technical College of the City and Guilds Institute does not find its full complement of students diminished by the opening of any number of polytechnics, any more than the London School of Economics and Political Science suffers by the establishment of economic classes all over London. The polytechnics, by spreading an elementary knowledge among thousands, positively feed the higher and more specialised institutions, which have until lately often suffered from the lack of sufficient preparation for their necessarily advanced curriculum.

Nor need we attempt to determine how far the advantages undoubtedly gained in the London Polytechnics by combining so many sorts and grades of work, are accompanied by corresponding drawbacks: nor whether they can ever outweigh the advantages gained by other institutions rigidly confining themselves to one sphere. In London, at any rate, there is clearly room for both kinds of institution. The polytechnics have amply justified their action by their remarkable success, not only in attracting and retaining tens of thousands of students, but also by their solid achievements in educating these students, whatever their grade, and in the high standard now attained by their more advanced work. But this is no reason why institutions which admit only one sex, or which deal only with a limited range of subjects, or which confine themselves to one particular grade of educational work in the subjects which they take up, should not continue unimpaired their own career of usefulness, enjoying all the advantages given by this concentration. The London Polytechnics cater for a *nouvelle couche sociale* in the educational world. Their rapid success in so many different directions suggests that, though their work has limits, these are not yet in sight.

March, 1898.

SIDNEY WEBB.

## THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE.

### INTRODUCTION.

The London School of Economics and Political Science was established in October, 1895, to provide systematic training in economics and political science, and to encourage original investigation and research. The original objects of the school, as stated in the prospectus, were (1) the provision of public lectures and classes in connection with them on economics (including economic theory and economic history), statistics, commerce, commercial geography, commercial history, commercial and industrial law, banking and currency, finance and taxation, and political science; (2) the provision of special classes, arranged as a three years' course of study, concluding with a research course; (3) the promotion, by means of scholarships, or otherwise, of original research; (4) the publication of books containing the results of researches in economic and political subjects conducted by the teachers of the school or under their direction; (5) the collection of a library for the use of the students of the school, consisting of books, reports, and documents illustrative of economic and political history and theory; (6) the organization of an "information department" to assist British students and foreigners visiting England for the purpose of investigation.

I may briefly summarise the work accomplished since this announcement was made. Nearly all branches of economic and political science are taught at the school, and arrangements are being made for more detailed treatment of special subjects. The lecturing and tutorial work of the school is done by the director and a staff of twenty lecturers,<sup>1</sup> of whom ten undertake the systematic classes and lectures held weekly throughout the session, and the rest deliver special courses of lectures from time to time. The special classes, the organisation of which presented many difficulties, were originally confined to economics. These have been extended to statistics and political science, and divided into three stages—the first year, the advanced, and the research divisions. An additional set of classes has been arranged in paleogeography and diplomatics, extending over two years. The work of the school has been so organised that, by an appropriate selection of classes

<sup>1</sup> Amongst past and present lecturers at the School, in addition to the Director, may be mentioned Mr. W. M. Aeworth, Mr. A. L. Bowley, Mr. Montague Barlow, Mr. Edwin Cannan, Rev. Dr. Cunningham, Professor A. V. Dicey, Mr. G. Lowes Dickinson, Professor F. Y. Edgeworth, Professor H. S. Foxwell, Mr. G. Laurence Gomme, Mr. Hubert Hall, Mr. E. J. Harper, Mr. Henry Higgs, Mr. F. W. Hirst, Mr. John Kemp, Mr. F. W. Lawrence, Mr. H. J. MacKinder, the late Professor Munro, Miss E. A. MacArthur, the Hon. George Peel, the Hon. Bertrand Russell, Mr. C. P. Sanger, Miss Lilian Tonn, Mr. Graham Wallas, Mr. Sidney Webb, Mr. E. A. Whittuck. Lectures have also been given by the Right Hon. Leonard Courtney, M.P., Sir Courtenay Ilbert, Mr. H. Llewellyn Smith, and Sir Edward Maunde Thompson.

and lectures, various classes of business men and municipal officials can obtain a complete course of training. Eleven research studentships,<sup>1</sup> ranging from £100 a year for two years to £25 for one year, have been awarded, and thirty scholarships, entitling the holder to free tuition at the school, have been awarded to university extension<sup>2</sup> and other students. Three books<sup>3</sup> in the series of "Studies in Economics and Political Science" have been published, two<sup>5</sup> are now in the press, and two<sup>6</sup> will be ready for publication in the course of the next few months. But the "Studies," for obvious reasons, include only a small proportion of the books and articles published by lecturers and students in direct or indirect association with the school. Such works<sup>7</sup> already amount to more than one hundred. A library—the "British Library of Political Science"—was established by public subscription, in connection with the school, at the end of 1896, and already contains upwards of 25,000 books, reports, and pamphlets, in addition to several valuable collections of documents, broadsides, MSS., etc., illustrating economic and political movements in England and America. No "information department" has been formally organised, but the school has become an important centre of information for British and foreign students visiting London for the purpose of investigation. Relations have been established with foreign institutions, and guidance as to sources of information has been given to students from Austria, Belgium, France, Germany, Italy, Norway and Sweden, the United States, and other countries.

Since the school commenced work in October, 1895, upwards of 900 students have been entered on the books of the school, and the average number for the last two years has been nearly 400. Moreover, the total cost of the school and the library, including the preliminary outlay before the school was opened, capital expenditure, purchase of books, and administration of the library, has been less than £7,000.

The experience of the school, therefore, so far, shows that the problem of organising higher economic teaching in England is not insoluble. In every department it has achieved greater success than was anticipated by its founders, and there is every reason to believe that, although

<sup>1</sup> The Research Students elected are Percy W. L. Ashley, Lincoln College, Oxford; Miss E. Deverell, Somerville College, Oxford; Mr. H. E. S. Fremantle, B.A., Oriel College, Oxford; Miss Beatrice Hewart, B.A. (Lond.), University College, Aberystwyth; Mr. F. W. Hirst, B.A., Wadham College, Oxford; Miss Lettice Ilbert, Somerville College, Oxford (twice); Miss E. M. Leonard, Girton College, Cambridge; Gilbert Slater, M.A., St. John's College, Cambridge; Miss Lilian Tomlin, Girton College, Cambridge.

<sup>2</sup> The elections are made by the Council of the London Society for the Extension of University Teaching.

<sup>3</sup> The candidates *e.g.*, for the Society of Arts Examination in Political Economy. Other elections are made after independent inquiry by the Committee of the School.

<sup>4</sup> *The History of Local Rates in England*, by Edwin Cannan, M.A.; *Select Documents illustrating the History of Trade Unionism: the Tailoring Trade*, edited by F. W. Galton, with a preface by Sidney Webb, LL.B.; *German Social Democracy*, by the Hon. Bertrand Russell, M.A., Fellow of Trinity College, Cambridge.

<sup>5</sup> *Local Variations in Rates of Wages*, by F. W. Lawrence, B.A., Fellow of Trinity College, Cambridge; *The Referendum in Switzerland*, by Simon Deploige, University of Louvain. Translated by C. P. Trevelyan, with introduction and notes by Miss Lilian Tomlin.

<sup>6</sup> *The Economic Policy of Colbert*, by A. J. Sargent, B.A.; *The History and Theory of the State Regulation of Wages*, by Professor Hewins.

<sup>7</sup> *E.g.*, *The Physiocrats*, by Henry Higgin, LL.B., joint Editor of the *Economic Journal*; *Principles of Local Government*, by G. Laurence Gomme; *Die Fabrik und Sanitäts-Inspektorinnen in England*, by Helene Simon (*Schmoller's Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft*, 1897).



it may still have many difficulties to encounter, it is a permanent addition to the educational institutions of the country. Founded in conscious imitation of the *École Libre des Sciences Politiques*, *Columbia College*, and other institutions on the Continent and in the United States, it is, in fact, unlike any of them. The actual work of organising it, and the arrangement of the lectures and classes in a manner suitable to the needs of those for whom they are intended, have stamped upon the school a peculiarly English character. In the following pages I shall explain the manner in which the school has been built up and courses of study have been devised, and in what directions the school is likely to extend. But before doing so it is necessary to describe briefly the position of economics and the state of economic teaching in England when the school was founded.

## SECTION I.—THE POSITION OF ECONOMICS IN ENGLAND.

Though the aggregate of the work done in England was considerable, it had long been the subject of complaint that the facilities for economic training were inadequate to the needs of the community, and meagre compared with those provided on the Continent and in the United States. The teaching already given was, as a rule, excellent, so far as it went, but most of it was elementary and theoretical, while the higher branches of economics were scarcely touched by the educational system. Here and there isolated individuals, or small groups of students, were doing advanced work in economic theory, or carrying on investigations in the neglected field of economic history; but the amount of work done, relative to that which required to be done, was so small that economic history could scarcely be said to have been seriously studied in England. Statistics, finance, the economics of public and municipal administration, railway economics, and many other important branches of economic science, were in the same or a worse position.

An explanation of this state of affairs, which was popular in many quarters and to a certain extent approved by some economists, was that dissatisfaction with the results of free trade and other measures, the scientific basis of which was furnished by the *laissez faire* school of economists, had destroyed public confidence in the works of the older writers, while their successors had failed to deal adequately with the pressing problems of modern times. It was said that in the hands of modern economists the science had become so divorced from the realities of life, so full of qualifications and abstractions, as to be mischievous or useless. But this explanation was both inadequate and misleading. There is, in fact, no country in the world where the doctrines of the economists have made so deep and permanent an impression, where the discussion of economic questions is so active and unfettered, especially amongst the middle classes. The public attitude with regard to the underlying assumptions of the classical economists has no doubt changed, but the change has been in the direction of modification rather than repudiation, and is accurately reflected in the writings of contemporary economists. While English opinion has not been unaffected by the reaction to protection which has exercised an important influence on the commercial policy of the Continent, there is no evidence of any real reaction in England.

The explanation of the neglect of economic teaching is to be found in historical causes. In England, economics, like the science of politics, has never, until comparatively recent times, been regarded as a subject

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which could, or ought to, form an important element in the curricula of educational institutions. English writers have sometimes been described by contemptuous critics as "the economists of the market-place"—a correct phrase if it is meant to imply that those who moulded English economic doctrines were in close contact with the world of business. In the long roll of early economic writers, statesmen and diplomatists, merchants and politicians, bankers and company promoters are found in great numbers, but there are few philosophers and no economists, in the ordinary meaning of the word. The books and pamphlets, thousands of which were published before the "Wealth of Nations," were not the work of an academical caste, but the bye-products of an active career in business or the public service. The received "text-book" for several generations was written by a prominent East India merchant, and based upon a petition drafted by him in support of the privileges of the East India Company. Unlike the majority of his English predecessors, Adam Smith was not directly interested in the promotion of practical objects, and his great work marks an epoch so important that he may justly be regarded as the founder of the modern science of economics. In his scathing criticism of the mercantile system there is, indeed, little trace of the calm and dispassionate temper which marks the impartial investigator. But his vast and detailed knowledge of contemporary conditions, his practical insight and sagacity, make the "Wealth of Nations" unique amongst works on political economy, for his suggestions became the settled policy of England, and influenced even Continental development. With his successors, "in the great majority of cases, practical aims were paramount, and the advancement of science secondary."<sup>1</sup> The advance, indeed, was great, but many of the leading principles of the classical economists were suggested in the heat of controversy on public affairs, and were worked out with direct reference to the great practical issues of a critical and anxious period of English history. A chronological list of English works on economics brings into relief not so much the various stages in the growth of economic science, as the successive economic and social movements which have made modern England. The struggles between contending parties on the Resumption of Cash Payments, and the Bank Charter Act, the New Poor Law, the Repeal of the Corn Laws, and early Factory Legislation gave rise to prolonged controversy and led to the publication of many important works on economics. But public opinion regarded the subject from the old mercantilist standpoint as a branch of statesmanship, or even of party politics. The leading hypotheses and conclusions of the classical economists became a habit of thought with the educated middle classes, but it cannot be said that they felt the need or the desirability of making provision for investigation or teaching, and no sufficiently large and influential class of professional economists had arisen to take organised action. Thus political economy, promoted neither by the State nor private munificence, was left to the operation of the principle of *laissez faire*.

So far as systematic investigation and organisation are concerned, the results have been disastrous. The professorships are few in number and poorly paid. The total income from endowments in the United Kingdom is less than £5,000 a year; in London it is less than £100. Much ability, therefore, which might be usefully exercised in economic work if the conditions were more favourable, is diverted into more profitable channels. It is, indeed, just possible to earn enough to live with

<sup>1</sup> Cannan's *History of the Theories of Production and Distribution*, p. 384.



extreme economy by combining together several different economic sources of income. But this requires unusual ability, perfect health, and unremitting toil. It is perhaps true that a man "is not likely to be a good economist who is nothing else." But it is equally true that the "something else" must be chosen with a view to the work and aims of the economist if it is to be a means to genuine scientific progress. The hope of pecuniary advantage is rarely the chief motive for scientific work, but young men of ability are not attracted by a career in which bare subsistence is uncertain. Thus economic investigation in England must as a rule be undertaken by people with independent means, whose choice of subject is more often ill-directed or purely capricious than really useful. There are many important departments of economics on which no books are to be found, and many others on which there are only books of a propagandist character.

While want of funds has crippled investigation and research, the same cause, together with the fact that economic teaching, in its higher branches, cannot be made to pay its own way, has paralysed all efforts at organisation. Occasional courses of popular lectures can in certain circumstances be made fairly successful, but there is no evidence that systematic courses of study, extending over two or three years, can at present be established, without the aid of public grants or private munificence. The steps taken in connection with the London School of Economics will show the nature of the difficulties which stand in the way of such a course.

## SECTION II.—THE ORGANISATION OF ECONOMIC TEACHING.<sup>1</sup>

The most effective encouragement to economic teaching, when the organisation of the London School of Economics was first discussed, was the partial recognition of the subject in certain University and other examinations. At Oxford, one paper in economic theory and economic history is set in the honour school of modern history. Compared with the other subjects of examination economics occupies an unimportant place. This is inevitable, because it is not co-ordinated with the constitutional, political and foreign history which form the real subject matter of the examination. It is usually recognised amongst undergraduates that it does not pay to devote much time to the study of economics. In the honour school of *Litteræ Humaniores* a few questions are set in one paper, but isolated candidates occasionally take economics as a special subject. In the pass schools candidates for group B<sup>3</sup> are examined in Walker's "Political Economy" and selected portions of Adam Smith's "Wealth of Nations." Economics therefore occupies a very subordinate position in the Oxford schools, and the syllabus of study required is meagre and badly organised. But even in present circumstances there appears to be no satisfactory reason why more is not made of the subject. Within the limits of the examination system, some hundreds of men might receive a careful, systematic, though not very complete, training in descriptive and theoretical economics, and the outlines of economic history, and the new research statute might be so worked as to supply the requisite stimulus to the higher branches of economic study and investigation. "At Cambridge, economic studies have been organised up to a certain point with energy and success. Both the moral science

<sup>1</sup> This section is in the main based upon an article by the present writer on the "Teaching of Economics" in the *Journal of the Society of Arts* for December, 1896.

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trips and the historical trips have attracted men and women with an aptitude for economic reasoning and research. Many of the candidates in these examinations have afterwards achieved distinction in the economic world; and the teaching at Cambridge is more systematic and continuous than at Oxford." Economics is one of the special subjects which may be taken up for the ordinary B.A. degree, but there are very few candidates. The examinations include papers in general economic theory, taxation and finance, and the economic functions of government. The position of economics in the examinations of the University of London was not in 1894<sup>1</sup> sufficiently important to give any considerable stimulus to the study of the subject, and the attendance

<sup>1</sup> Under the new regulations economics occupies a more important position in the examinations of the University of London than in any other examination in the United Kingdom.

#### EXTRACT FROM THE REGULATIONS RELATING TO DEGREES IN ARTS FOR 1899.

##### B.A. EXAMINATIONS.

No candidate shall be admitted to this examination within one academical year of the time of his passing the Intermediate Examination in Arts, unless he has previously taken the degree of B.Sc. No candidate will be allowed to take both the Pass and the Honours Papers in the same subject; but every candidate must take the Pass Papers in those subjects in which he does not offer himself for Honours. Candidates who present themselves for the Honours Examination in both French and German will be exempted from taking the Pass Papers in any other Branch besides I. and II.

Candidates shall be examined in four of the undermentioned Branches of Knowledge, namely, in Branches I. and II., and in any other two they may select out of the remaining Branches (III.-VIII.).

I. Latin, with Roman History. II. Greek, with Grecian History. III. English. IV. One of the following languages: French, German, Italian, Arabic, Sanskrit. V. History. VI. Either *Pure Mathematics* or *Mixed Mathematics*. VII. Mental and Moral Science. VIII. Political Economy.

##### REGULATIONS FOR B.A. PASS EXAMINATIONS.

##### VIII.—*Political Economy.* (Two Papers.)

Political Economy, descriptive and theoretical, treated in an elementary manner. The subject-matter of this examination may be gathered from the following works, which indicate the general range of the examination without limiting it necessarily to their contents: 1. Marshall, *Elements of Economics*; 2. Walker, *Political Economy*; 3. Jevons, *Money and the Mechanism of Exchange*; 4. Bagehot, *Lombard Street*; 5. Clare, *Money Market Primer*; 6. Gosechen, *Theory of the Foreign Exchanges*; 7. Bastable, *Commerce of Nations*.

##### REGULATIONS FOR THE B.A. EXAMINATION FOR HONOURS.

Any candidate who presents himself at the B.A. examination in the requisite Branches of Knowledge may be examined for Honours in any one or more of the compulsory and selected Branches, not being a Branch in which he presents himself for a Pass, but not within three academical years of passing Matriculation. And any Bachelor of Science who presents himself for the B.A. examination may be examined for Honours in one or more of the Branches thereof, but not within three years of passing Matriculation, unless he have previously obtained a Scholarship at the B.Sc. examination in either of the Branches of Knowledge which are common to it with the B.A. examination, in which case he shall not be admissible to the examination for Honours in that Branch.

##### *Political Economy.*

1. Political Economy, descriptive and theoretical, including the Scope and Method of the Science. 2. Public Finance and Economic Functions of the State. 3. Outlines of English Economic History. 4. Essay.

For this Examination five Papers shall be set on the days appointed in the Order of Examinations, viz., three papers on sections 1 and 2, one on section 3,



at the lectures held at University College and King's College<sup>1</sup> seemed to show that there was no spontaneous demand in London for economic teaching. In the examination of Victoria University, the University of Durham, and the University of Wales, economics occupies a very subordinate position. It is no doubt true that some students at the Universities devote time and energy to the subject without reference to the examinations, and receive guidance in their work from the professor, or other teacher. Some of the most distinguished of living writers

and one containing subjects for an essay. The candidate who shall distinguish himself the most of those who were not more than 23 years of age at the commencement of the Pass Examination in Political Economy, shall receive a Prize to the value of 15*l.* in books or money.

#### REGULATIONS FOR THE MASTER OF ARTS EXAMINATION.

No candidate shall be admitted to the examination for the degree of M.A. until after the expiration of one academical year from the time of his obtaining the degree of B.A. in this University; nor unless he has shown evidence of having completed his twentieth year.

#### *Branch VII.—Political Economy.*

Any two (to be selected by the candidate) from the following four subjects: 1. Logic. 2. Psychology. 3. Ethics. 4. Political Philosophy.

And in addition, any two of the subjoined special subjects: 1. History of Economic and Social Theories, with special reference to some school to be prescribed from time to time. 2. General English Economic History, together with a special subject of Economic History to be prescribed from time to time. 3. The Theory and Practice of Statistics, together with a special subject to be prescribed from time to time. 4. Public Administration, together with a special subject to be prescribed from time to time. 5. Problems in pure Economic Theory, including the application of mathematical and graphical methods to such problems.

*N.B.*—The special subjects under headings 1, 2, 3, 4, for 1899 and until further notice will be: 1. The Physiocrats. 2. The History of Currency and Banking from 1663–1844, both inclusive. 3. Wage Statistics. 4. The Regulation of Local Governments by the Central Authority.

Eight papers shall be set for this examination. The candidate who shall distinguish himself most in Political Economy at the M.A. Branch VII. examination, shall receive a prize of books, the "Gerstenberg Memorial Prize," to the value of 16*l.*, provided that he shall have satisfied the examiners in the other subjects of that Branch.

#### REGULATIONS FOR THE DOCTOR OF LITERATURE EXAMINATION.

No candidate shall be admitted to this examination within one academical year of his passing the M.A. examination.

Every candidate for the degree of D.Lit. shall state upon his form of entry the special subject belonging to one of the sections in which the M.A. has been taken, upon a knowledge of which the qualification for the Doctorate is rested; and together with the form of entry there shall be submitted (*a*) a Dissertation or Thesis, printed, type-written or published in the name of the candidate, dealing with some special portion of the subject so stated, embodying the result of independent research, or a critical review of the literature of the selected subject, or generally tending to the advancement of learning; (*b*) any printed contribution or contributions to the advancement of learning published independently or conjointly which the candidate may desire to submit in support of his candidature.

Candidates for the degree of D.Lit. will be expected to be so fully conversant with the Branch of knowledge they profess as to be able to satisfy any test of their acquirements that may be judged necessary.

<sup>1</sup> Economics is now compulsory in the Theological Faculty of King's College.

have in this manner been attracted to investigation and research. But the number of such students cannot under existing circumstances be very large. Until the recent establishment of research degrees at Oxford and Cambridge, there was no inducement to reside after taking the B.A. degree, except the hope of obtaining distinction in another school or tripos. In the Civil Service examinations (clerkships, Class I.), economics is an optional subject. Candidates are expected to possess a knowledge of economic theory, as treated in the larger text-books, of existing economic conditions, and of statistical methods as applied to economic inquiries, together with a general knowledge of the history of industry, land tenure and economic legislation in the United Kingdom. In grammar schools, girls' high schools, and other secondary schools, the elementary study of economics has been to a certain extent encouraged by the system of local examinations, in which it is an optional subject. The examinations of the Institute of Bankers, and the London Chamber of Commerce, in which economics is an obligatory subject, and that of the Society of Arts, appeal to another class.

Valuable monographs have from time to time been written for or in connection with the Cobden prizes, the Adam Smith prize at Cambridge, the Gerstenberg prize of London University, the Whately prize at Dublin, the gold and silver medals of the Royal Statistical Society, the Berkeley Fellowships at Owen's College, and other rewards for past achievements or aids to investigation. In London, the Birkbeck Institute, the City of London College, and the Working Men's College have organised lectures and classes. The University settlements, particularly Toynbee Hall, where there is a valuable economic library, have not only arranged classes and lectures, but have become useful centres for the study and investigation of modern problems. The University Extension movement has been associated throughout its history with the popularisation of economics. In recent years, however, economics has lost ground in the centres. There have been two important drawbacks to University Extension lectures on economics: (1) the difficulty of arranging systematic and continuous courses of study, extending over at least two sessions; (2) the absence of public institutions in which work of an advanced character could be carried on. Both have their origin in want of funds. It is, in general, necessary that the courses of lectures should meet with sufficient financial support to pay expenses. In these circumstances it is difficult, almost impossible, to create "economic" centres, with an established curriculum in economics.

The Royal Statistical Society, for the last sixty years, and the British Economic Association, for the last seven years, have encouraged individual work. The "Economic Journal," published quarterly by the latter, compares favourably with some of the best German periodicals, and probably exercises a wider influence than the "Journal of the Royal Statistical Society," in which the articles are, as a rule, of a more technical character, but which frequently contains important contributions to economic science. The "Economic Review," though published for the Oxford branch of the Christian Social Union, includes representatives of all schools of thought amongst its contributors. The quarterly article on "Legislation, Parliamentary Enquiries and Official Returns," is the most readable, and, at the same time, exhaustive account of official publications relating to economic subjects published in England. To these periodicals may be added those dealing with the more technical applications of economics and statistics, such as the "Economist," the "Bankers' Magazine," and the "Insurance Magazine."



It should also be noted that purely educational classes and lectures frequently form an integral part of the work of societies of a partisan character. The educational lectures and correspondence classes, for example, of the Fabian Society, have stimulated the scientific study of economics in the most unlikely quarters. Their list of books on economic subjects, which is widely circulated, is an admirable bibliography. Some of the leaflets and suggestions for reading are well prepared, and have a wide influence.

It is evident, therefore, that when the School of Economics was founded, scarcely any branch of higher education was so ill-provided for as economics. Here and there the personal influence of a few individuals or a general sense of propriety had led to its inclusion in certain recognised examinations, and in this manner a certain stimulus was given to elementary, and sometimes even to advanced work. But those who have achieved distinction in the higher branches of the subject have seldom derived their inspiration or their preparatory training from the study of so-called elementary economics. Nowhere could the economic syllabus be said to have been worked out in definite relation to particular callings—investigation and research, the Civil Service, municipal and public work, or business life. There were no great institutions, in which advanced work could be carried on, and which might serve as the outward and visible embodiment of a higher range of ideas than those which the student had already mastered. But the active interest in economic questions, the widespread desire for systematic training, and the successful experience of other countries, encouraged the hope that if such an institution could be established, it would in course of time become a great and useful centre of economic work. In London especially, nearly every branch of economics could be studied with greater advantage than in any city of the world.

### SECTION III.—THE ESTABLISHMENT OF THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE.

the provision  
of funds.

To suppose, in 1894, that a great teaching institution might be established in England, and generously endowed by private subscription or public grants, would have been, like the expectation of complete free trade in 1776, "as absurd as to expect that an Oceana or Utopia should ever be established in it." But complete free trade was only "restored" by gradual stages, and institutions destined to be permanent do not spring suddenly into life, fully equipped for what they have to do. The mechanical security of rich endowments and an assured public may be the ultimate goal, but cannot be the means of successful organisation. What was wanted in order to found a School of Economics was (1) a small body of persons whose business in life should be to achieve the desired end, and (2) a sufficient sum of money to provide for a rudimentary scheme, and the expenses of organisation, and to serve as a guarantee against loss. With proper organisation, fees and miscellaneous donations might be expected to contribute a considerable sum. These conditions were satisfied by the provision of trust funds for that purpose. A sum of £10,000 had been left at the disposal of trustees, of whom Mr. Sidney Webb was chairman, and a portion of this fund could be devoted to the promotion of the scientific study of economics and political science, and for investigation and research. Provisional arrangements were discussed at the end of 1894, and a small committee was appointed to consider and carry into effect a scheme

for founding a School of Economics. For various reasons, however, the work of organisation did not commence until the beginning of April, 1895. It was most important that the position of the proposed school should be as central as possible. This was made practicable by the generosity of the Society of Arts, who placed their hall at the disposal of the committee, on certain days every week, for the delivery of courses of lectures. By the end of May, 1895, matters were sufficiently advanced for the publication of a preliminary prospectus, containing a brief statement of the objects of the proposed school,<sup>1</sup> and a provisional list of lectures.

It may be well to state here the principles adopted in the organisation of the school. (1) For various reasons it was decided not to open the question of examinations. There was at that time no existing examination, the syllabus of which covered the ground, or even an appreciable portion of the ground, it was proposed that the courses of the school should occupy. To modify existing examinations was impracticable, even if it had been desirable, and it would have been highly improper for a new and untried institution to invent an examination system of its own and seek to impose it on the public. (2) It was recognised that the claim of economic training to public support must be based upon its practical usefulness, not in the narrowly utilitarian sense of enabling people to earn more money, but in the sense of promoting efficiency, diminishing social and economic friction, and extending the knowledge of public affairs. (3) It was realised that it was absolutely futile to launch ideal programmes in the hope that they would appeal to some hypothetical average student or students. Successful organisation of a programme involves the organisation of the people for whom it is intended. It is necessary to study closely the needs of distinct groups of men and women in different departments of business, professional or public work, and to adopt methods, appropriate to each group, of bringing the courses of instruction to their notice. (4) The application of this principle determined the general character of the scheme of instruction adopted, viz., specialised courses of lectures and classes suitable for particular groups, and a basis of scientific training common to all departments.

It was announced in the preliminary prospectus that "the special aim of the school will be, from the first, the study and investigation of the concrete facts of industrial life and the actual working of economic and political relations, as they exist or have existed, in the United Kingdom and in foreign countries. With this object in view, the school will provide scientific training in methods of investigation and research, and will afford facilities to British and foreign students to undertake special studies of industrial life and original work in economics and political science." The organisation of the classes and lectures began with the consideration of the kind of training, commencing with a stage a little above the elementary, requisite for the most advanced work contemplated by the school.

It was then considered how far the scheme so mapped out should be modified or supplemented in its lower branches in view of the needs of different groups of civil servants, business men, and persons engaged in various departments of public work. It was, of course, impossible to contemplate the establishment at once of the elaborate and complicated scheme which the complete application of this method would have involved. Only a small proportion of the ultimate aims of the

Principles  
of organisation

Organisation  
by groups

The  
Technical  
Education  
Board, and  
The London  
Chamber of  
Commerce

<sup>1</sup> *Vide supra*, p. 76.



school could be immediately achieved. In the organisation of the commercial department, the school enjoyed the co-operation and support of the London Chamber of Commerce. The Chamber had for eight years devoted much energy to the establishment of a system of commercial examinations, and from the first took much interest in the school. It was in close touch with many business firms, and the Commercial Education Committee was very favourably disposed towards the provision of classes and lectures, which would promote the training, on scientific lines, of young men and women employed as clerks or in the higher departments of commercial life. It seemed clear that if appropriate lectures and classes were arranged they would be successful. The school, therefore, with the co-operation of the Chamber of Commerce, approached the Technical Education Board with a view to the arrangement of special courses of a "higher commercial" character, and a grant of £500, increased to £1,200 in the year 1896-7, was made for that purpose.

The complete scheme of lectures and classes for the first year was as follows:—

The first  
programme.

*Special Classes.—Elementary Course:—*

- (i.) Outlines of economic theory.
- (ii.) Outlines of English economic history.
- (iii.) Elementary statistics.

*Advanced Courses:—*

- (i.) The history of economic theory, and the critical study of the leading economic writers.
- (ii.) The detailed study of the economic history of England in relation to that of foreign countries.
- (iii.) Statistics, including course of training in framing forms of inquiry; tabulation; interpolation, investigation of causal relations between economic phenomena by statistical method; applications of the law of error; graphic methods of statistics; etc.

*Final or Research Course:—*

- (i.) Methods of investigation.
- (ii.) Authorities.
- (iii.) Practical work under supervision.

*Public Lectures:—*

- (i.) The State in relation to industry and commerce, historically considered.
- (ii.) The economic effect of alien immigration.
- (iii.) Railway economics.
- (iv.) Commercial geography—the influence of geographical conditions on commercial development; trade routes, etc.
- (v.) Commercial history—the history of English commerce.
- (vi.) Commercial law—the law in relation to the exchange and distribution of wealth.
- (vii.) (a) The history and principles of banking and currency, with special reference to England; (b) the Bank of France.
- (viii.) The history of local rates in England; and the machinery of rating.
- (ix.) The English Constitution since 1832.

During the year these courses were supplemented with others on the Theory of International Trade, and the Principles of Taxation, and on such special subjects as the Physiocrats, Continental Labour Legislation, the Referendum, and an historical and critical course on German Social Democracy. During the summer time also the classes on Palæography were inaugurated. It was not found practicable to arrange special classes on Political Science. Informal classes, however, were held.

The lecturers, in addition to the director, were Mr. W. M. Acworth, Mr. A. L. Bowley, Mr. Edwin Cannan, the Rev. Dr. Cunningham, Prof. F. Y. Edgeworth, Prof. H. S. Foxwell, Mr. Hubert Hall, Mr. E. J. Harper, Mr. H. Higgs, Mr. H. J. Mackinder, Dr. J. Mandello, the late Prof. Munro, the Hon. George Peel, the Hon. Bertrand Russell, Mr. Graham Wallas, and Mr. Sidney Webb.

#### SECTION IV.—THE DEVELOPMENT OF THE PROGRAMME.

Since the first year the changes have been in the direction of extending and systematizing the departments which were then inaugurated, rather than additions to the programme. It was found that the usual method of teaching economics, viz., by taking a theoretical text-book or text-books as a basis for class work, did not lead to satisfactory results. The students were frequently quite unacquainted with the structure of modern industry and commerce, unused to quantitative conceptions, and untrained in the application of quantitative methods. Many, therefore, failed to understand some of the fundamental principles of economic science, and it became necessary to devise some means of providing for their ascertained needs. After some experiments, the present system of classes, consisting of a description of the general structure of modern business and the general features of modern industrial and commercial organisation, the meaning and use of economic terms, the outlines of economic history, and elementary statistics, was adopted, the full course to extend over two years. On this basis a superstructure of theoretical and historical training is imposed, leading up to the final or research course. The elementary classes are now the basis of all the work of the commercial department. The special classes, together with the courses of lectures, practically meet the requirements of the revised regulations for the examinations of the University of London for the B.A. and higher degrees in economics.<sup>1</sup>

New departments have been arranged on the same plan as the economic classes. The system of special classes has been extended to the Department of Political Science, and provision made for the training of municipal officials. Greater facilities have been provided for the comparative study of economic and political questions, and for work in the department of research. In connexion with the latter, the classes in Palæography and Diplomatics have been very useful. These classes were originally established to assist those students who were engaged in research on mediæval subjects. It was, and is, impossible to obtain a similarly complete and practical training elsewhere in the United Kingdom. They undoubtedly form the nucleus of an *École des Chartes*. Nominal and sessional examinations have been instituted, and individual tuition, which has always been given to research students, extended to those attending the first year and advanced courses. A department of finance and taxation, commenced at the end of the first year, has become a permanent and successful part of the school work. The

<sup>1</sup> *Vide supra*. Note, pp. 81 and 82.

following is a brief *resumé* of the principal courses<sup>1</sup> for the year 1898-9:—

The Session 1898-99 will be divided into three terms, viz.:—Michaelmas Term, 7th October to 16th December, 1898; Lent Term, 13th January to 23rd March, 1899; Summer Term, 21st April to 30th June, 1899.

The following lectures and classes have been arranged:—

### ECONOMICS.

*Special classes confined to full students of the school.*

#### FIRST YEAR'S COURSES.

##### 1. Descriptive Economics.

The object of this class will be to make students acquainted with the structure and organisation of modern industry and commerce, as exhibited in the cotton, iron, and other great trades of this country. In addition to attendance at the ordinary meetings of the class, students will find it to their advantage to attend certain courses of lectures, *e.g.*, banking and currency, railway economics, trade unionism.

##### 2. The Meaning and Use of Economic Terms, and the Leading Principles of Economic Science.

##### 3. Outlines of English Economic History.

Mediæval England: The manor and agriculture. Industry and the guilds. The towns and internal trade. Influence of the Church.

Decay of the System: Emancipation of the labourer. The woollen manufacture. Its effects on agriculture. The guilds and the "domestic system." Foreign trade, the hanse and the staple.

The State as an Economic Force: The monasteries. Enclosures. Pauperism and the Poor Law. The guilds and the new centres of industry. Foreign trade and chartered companies. The mercantile system. The Bank of England. National Debt.

The Industrial Revolution: New inventions. Rise of the factory system. Trade Unions. The new Poor Law. Agriculture and enclosures. Corn Laws. Foreign trade. Decline of the Companies. Abandonment of mercantile system. Free trade.

Books.—General History: Ashley, *Economic History*; Cunningham, *Growth of English Industry and Commerce*, Vol. II.; Hewins, *English Trade and Finance*; Toynbee, *Industrial Revolution*.

For Reference: Vinogradoff, *Villeinage in England*; Seeböhm, *Village Communities*; Gross, *The Guild Merchant*; Rogers, *Agriculture and Prices*, and *Six Centuries of Work and Wages*; Traill, *Social England* (Commercial sections).

##### 4. Elementary Methods of Investigation, chiefly Statistical.

The object of this class is to enable students of economics to make intelligent use of published blue books and returns rather than to meet the needs of professed statisticians. The lecturer will illustrate the relation of statistics to economics and some of the common uses of statistics, and will explain selected chapters from Giffen's *Essays on Finance*, Jevons' *Investigations in Currency and Finance*, Charles Booth's *Labour and Life in London*, and other works.

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<sup>1</sup> Subject to alterations and additions (August, 1898).



SECOND AND THIRD YEAR'S COURSES.

5. The History of Economic Theory.

The work in this class will be to continue that commenced in the Summer Term of 1898, "Adam Smith's Contributions to Economics."

6. Chartered Companies.

The essential nature of a chartered body. Two-fold problem for investigation, (a) in economics, (b) in political science. The use and validity of the argument from past to present.

Origin and Development of the System: Early trading associations in England. Origin and nature. Economic and political results. Change from regulated to joint-stock companies. Conditions—geographical, political, and economic—necessary for the expansion of the system. Dutch and French companies. Peculiar character of the latter. The individual and State as factors in company promotion. Contrast of English and French methods.

The System in its Working: Grouping of companies according to objects and spheres of action. European trading companies. American proprietary companies. Rapid transformation to colonies. East India Company. Gradual change from commercial to political power. The element of State control. Contrast of French and English companies in working and results. Economic and political justification for the system. The function of the Interloper. Effects of the system on national trade and development. Causes of decline of companies.

The Modern Revival: Causes. How far conditions similar to the past. Limitation of movement to Africa. Former African companies. The new companies. Their character and charters. Predominance of political question. Relations with State. French projects. Economic position as trading companies. The case of the natives. The companies as a factor in the future affecting (a) the development of home trade, (b) international relations.

Books to Read: Bonassieux, *Les Grandes Compagnies de Commerce*; Cawston and Keane, *The Early Chartered Companies*; Hewins, *English Trade and Finance*, Cap. III. (The Trading Companies); Palgrave, *Dictionary of Political Economy* (articles on the various companies); Kelsie, *The Partition of Africa*.

7. The Economic History of England in relation to that of Foreign Countries.

Subject for Michaelmas Term.—"The State Regulation of Wages."

(1.) Introductory. The State regulation of wages not confined to England. Examples from France, Germany, Italy, Holland, etc.

(2.) Statutory development from 1349 to 1563.

(i.) Municipal regulations. (ii.) The real and proximate causes of the legislation of 1349-51. (iii.) Development of the powers of the Justices of the Peace. (iv.) Fifteenth and early sixteenth century assessments. (v.) Relation of the wages statutes to other social legislation.

(3.) The statute of apprenticeship (1563).

(i.) Character of Elizabethan legislation. (ii.) Provisions of the statute of apprenticeship. (iii.) Its relation to the Poor Law. (iv.) Administration of the statute (a) 1563-1642, (b) during the Civil War, the Commonwealth and the Protectorate, (c) from the close of the seventeenth century to the repeal of the statute.

8. Modern Currency Standards.



The subject of study will be the time, manner and causes of the introduction of the present standards into Great Britain and Ireland, India, and other British colonies and dependencies, the United States, France, and other Latin Union countries, Germany, the Netherlands, Austria, etc.

### STATISTICS.

#### FIRST YEAR'S COURSE.

See No. 4.

#### SECOND AND THIRD YEAR'S COURSES.

##### 9. The Theory and Practice of Statistics.

Michaelmas and Lent Terms: Definition of statistics. Accumulation of data; methods of collection, tabulation and summarizing. Use of averages and diagrams, periodic curves, historical curves. Grouping of figures. Illustrated by special studies of figures relating to revenue, population and demography, production, consumption, foreign trade, income, and especially of wages. Work practical as far as circumstances allow. Prices, index numbers; workmen's budgets, their collection and use. The accuracy of different classes of estimates and of averages; the conditions of accuracy.

Summer Term: The law of error and method of least squares. The laws of great numbers. Application to index numbers and the accuracy of averages. Questions of cause and effect. Correlation.

(The mathematics employed will be as simple as possible and confined chiefly to the Summer Term).

##### 10. Some Applications of Statistics to Problems of the Present Day.

Michaelmas Term: General principles and graphic methods, illustrated by statistics of life and death. The census. The Registrar-General's returns. Application to life insurance and to questions of the public health. Fallacies. Easy examples will be set to students from actual figures.

Lent Term: The smoothing of curves. The law of the distribution of incomes. Periodic curves. Fluctuations in credit, volume of trade and want of employment. Seasonal and cyclical fluctuations. Averages and means with special reference to index numbers. The fall in prices; its measurement and its cause or causes. The connection between the fall in prices and depression of trade.

Summer Term: General description of Imperial and local taxation. Discussion of its incidence, with special reference (i.) to the amount of taxation borne by the working class; (ii.) to the burden on land. Death duties. Progressive and digressive taxation. The problem of the present day.

Books used: Reports of the Registrar-General; Reports of the Census; The Statistical Abstract; Abstract of Labour Statistics; Giffen, *Essays in Finance*; Jevons, *Investigations in Currency and Finance*; Farr, *Vital Statistics*.

### PALÆOGRAPHY AND DIPLOMATIC.

Special classes confined to full students of the school.

##### 11. Elementary Palæography and Diplomatic, for new students, chiefly of English Manuscripts and Records from the Seventh to the Seventeenth Century.

12. Practical Work by Advanced Students: Editing, Calendaring and Describing MSS.

This class will continue the practical work of transcribing and editing the original MSS. on which it worked last year. This will be published by the school as soon as possible after it is completed.

*Courses of Lectures.*

13. Railway Economics.

14. The Policy of Different States in Relation to Means of Transport.

15. Railway Law.

16. Railway Finance.

A detailed syllabus of the Railway Department will be published in September.

17. The History and Principles of Banking and Currency, with Special Reference to England.

Michaelmas Term: Ten lectures: (i.) The functions and economic significance of money; (ii.) metallic currencies and mintage; (iii.) various systems of legal tender; (iv.) methods of maintaining currency parity; (v.) questions of monetary standard and valuation; (vi.) decimal coinage and international money; (vii.) the structure and functions of the English banking system; (viii.) the reserve and the discount rate: the money market generally.

Lent Term: Ten lectures: (ix.) The regulation of the Note Issue and the Bank Acts; (x.) the Stock Exchange; (xi.) the Foreign Exchanges; (xii.) commercial fluctuations: their causes and history; (xiii.) the relation between metallic money, credit, and prices; (xiv.) the method of measuring variations in the value of money.

The second half of the two years' course will be given in the Michaelmas and Lent Terms of the session 1899-1900, and will be mainly historical.

18. Markets and Dealings.

Markets and Valuation Generally. "Making a Price." The Theory of Market Price. The Mechanism of a great Market. Tests and Conditions of Efficiency in Markets. Speculation and its General Economic Effects. The Stock Exchange as a Typical Market. Recent attempts to Regulate Dealing by Legislation.

19. Foreign Banking Systems.

20. Commercial Geography.

21. Commercial Law.

1. History of Commercial Law in England. 2. Contract: nature of, generally. Elements common to all Contracts: (a) Formalities required. Consideration. Capacity to Contract; (b) Effect of Mistake, Misrepresentation and Fraud; (c) Legality of Object: Wagering Contracts; (d) Assignment of the Contract: Negotiability and Bills of Exchange; (e) Discharge of the Contract. Attention will be directed to the following special Contracts: (i.) Sale of Goods; (ii.) Contract on the Stock

Exchange; (iii.) Contract of Affreightment; Charter Party and Bills of Lading; (iv.) Marine Insurance; General and Particular Average; (v.) Bills of Exchange and Cheques; (vi.) Agency.

## 22. Modern Company Law and its Connexion with the Development of English Commerce.

Types of Association: 1. Partnerships: *nô* corporate entity. 2. Corporations: no individual responsibility. 3. Intermediate between 1 and 2. (i.) Companies with Unlimited Liability, cf. French "*Société en nom collectif*." (ii.) Companies with Limited Liability: French "*Société anonymes*"; German "*Aktiengesellschaften*"; cf. also German Partnerships with Limited Liability. (iii.) Companies partly Limited, partly Unlimited; Act of 1867, sec. 4; French "*Sociétés en Commandite*."

English Law of Companies.—Based on the Law of Partnership. The Partnership Act of 1890: Relation of Partners to Third Persons; of Partners to one another; Dissolution of Partnership. 1. Companies at Common Law. 2. 1826, Commencement of Modern Era: Incorporation with Individual Liability, 6 Geo. IV. 3. 1855, Limitation of Liability introduced; 1862, Consolidation Act and subsequent Acts. Act of 1862. Types of Company permitted by:—

I.—Company Limited by Shares. A. *Formation of Company*. 1. Memorandum of Association: the Charter of the Company; necessary Contents; Division into Shares. Preference and Founders' Shares. Memorandum: how far capable of subsequent alteration. 2. Articles of Association: Bye-Laws of the Company; Table A.; usual Contents apart from Table A. 3. Register of Members and of Mortgages. 4. Preliminary Contracts: how far binding on the new Company. 5. Prospectus: Act 1867, sec. 38; Waiver of by Shareholder; Shareholder's Right of Action for Misrepresentation apart from Waiver (i.) Against Directors: *a.* at Common Law: Action for Fraud; *b.* Under Act 1890. (ii.) Against the Company. 6. Application for Allotment of Shares; Share Warrants to Bearer; Shares issued as Fully Paid-up; Transfer of Shares; Certification of Transfer. Suggestions from France and Germany. B. *Management of the Company*. 1. Agents of the Company: Directors, Secretary, Auditors; their Duties. 2. Meetings of the Company: (i.) Ordinary General Meetings; (ii.) Extraordinary General Meetings; Procedure by: *a.* Ordinary, *b.* Special Resolutions; Effect of Acts done *ultra vires*. 3. Ordinary Business: Accounts; Dividends; Profits, what are; *Verner v. General Investment Trust*; Alterations of Capital; Suggestions of Lord Davey's Committee as to Duties of Auditors; Comparison with Foreign Methods: *e.g.*, Separate Boards of Inspection and Management, Compulsory Reserve Funds.

II.—Companies Limited by Guarantee. Unlimited Companies. C. *Winding-up of Companies*. 1. By the Court: Grounds on which the Court will Wind-up (sec. 79); Who may Present the Petition; Effect of an Order to Wind-up; the Position of the Liquidator. 2. Under Supervision of the Court. 3. Voluntary Winding-up by the Shareholders: When allowed (sec. 128); Effect of; Powers of Voluntary Liquidator; List of Contributories; A and B List. Reconstruction of the Company. French and German Methods of Winding-up; French Compulsory Winding-up if three-fourths of Share Capital Lost; Comparative Statistics.

## 23. Bankruptcy and Bills of Sale.

## 24. Foreign Trade.



*Michaelmas Term.*—After a brief sketch of Mediæval Commerce and the growth of Foreign Trade under the Mercantile System the lectures will deal more especially with:—

(1) The State of European Commerce after the great War with France (1793-1815), and the Relative Position of Great Britain. (2) The Growth and Influence of Free Trade. Its Theoretical Basis. (3) A brief sketch of the Commercial Relations between Great Britain and Foreign Countries from 1815 to the Present Time. Continental Movements and their influence on English Commerce. An Examination of Typical Commercial Treaties, *e.g.*, the Treaty with France in 1860. Recent Tariff Changes. (4) The reaction against Free Trade in France, Germany, and the United States, and its influence in England. Changes in Foreign Import Duties. Foreign Trade since 1873. Relative Position of Great Britain at the Present Time.

*Lent Term.*—French commercial policy at the end of the eighteenth century contrasted with that of England and Prussia. Turgot's Administration. The Treaty of Commerce between England and France (1786) and its effect on English and French Trade. The Tariffs of the Revolutionary Period. The Berlin and Milan Decrees. The Influence of the Revolutionary Wars on French Policy. The Tariffs of the Restoration and the state of Opinion in France.

The Revolution of 1830 and the Bourgeoisie. Measures of the Comte d'Argout. The Schemes of 1833. The Circular of the Minister of Commerce and the replies of the silk manufacturers of Lyons, the merchants of Bordeaux, the wine-growers of the Gironde, etc. Duchâtel's Commission. Hostility of the Manufacturers. Ordinances of 1834. New Commission and Ordinances of 1836. Treaties with Holland and Belgium. Passy and Guizot. Influence in France of the English Free Trade Movement. Publication in 1845 of Bastiat's *Cobden et la Ligue*. The "Association pour la liberté commerciale." Effect of the Revolution of 1848.

Sainte-Beuve's Propositions, and their Rejection in 1851. The Government "pratiquait la liberté, sans vouloir en professer ouvertement la doctrine." Decrees modifying the Protective System. The Treaty between England and France (1860). Anglo-French Relations from 1860 to 1880. Léon Say's Overtures. Conferences in London in 1881. The Treaty of 1882.

The Tariff System of Germany at the end of the Eighteenth Century. Commercial Questions before the German Diet. Stein and Hardenberg in Prussia. The "Nouvelle formule" of 1815. The Commission of 1817. Influence of Adam Smith on German Economics.

The Prussian Tariff of 1818 and its Influence in other German States. The Congress at Carlsbad. List and the German Commercial Association. Conference at Vienna, 1819-1820. Negotiations of the Middle German States. Abortive Conferences at Darmstadt, 1820-1823. Policy of Individual States. Tariff War. Treaties between Baden and Hesse-Darmstadt, and Bavaria and Wurtemberg, 1824. Conference at Stuttgart, 1825. Success of Prussia: Schomberg-Sondershausen and other States, 1819-1828. The Bavaro-Wurtemberg Union; the Prusso-Hessian Zollverein; and the Middle German Association, 1828. Hanoverian Policy and the Steuerverein, 1830. Breakdown of the Middle German Association. Accession of Electoral Hesse to the Prusso-Hessian Union, 1831. Negotiations between Prussia and the South German States. The First Treaty of the Zollverein. States included in the new association. The Accession of Baden, Nassau and Frankfurt. Negotiations and Treaty with Hanover. The Influence of List. The Zollverein and Austria. Commercial Treaties. Con-



stitution of the Zollverein. The Zoll-Parlament. Economic Results of the Zollverein.

Books suggested for both terms.—Amé, *Etude sur les tarifs des douanes et les traités de commerce*; Beer, *Geschichte des Welthandels in 19ten Jahrhundert*; Bowring, *Reports*; Maurice Block, *Dictionnaire de la Politique*; Butenval, *Works* (see the collection in the British Library of Political Science); Conrad, *Handwörterbuch* (selected portions); Legoyt, *La France et l'Etranger*; Levasseur, *Histoire des classes ouvrières depuis 1789*; Levi, *History of British Commerce*; List, *The National System of Political Economy* (trans. by S. S. Lloyd); Morley, *Life of Cobden*; Porter, *Progress of the Nation*; Rand, *Economic History since 1763*; Richelot, *Le Zollverein*; Schönberg, *Handbuch* (selected portions); Seeley, *Life and Times of Stein*; Stephens, *Life and Writings of Turgot*; *Verhandlungen der deutschen Zoll-Parlaments*; Zimmerman, *Geschichte der preussisch-deutschen Handelspolitik*.

25. The above course will be followed by a class dealing  
 . with Statistics of Trade, and particular points raised  
 in the lectures, especially with reference to Germany.

#### PUBLIC FINANCE.

26. Systems of Taxation.

(i.) The Development of the Theory of Taxation, with special reference to leading writers of England, France, and Germany.  
 (ii.) The leading features of English Financial History, from the Act of Union between Great Britain and Ireland to the Present Time.  
 (iii.) Direct *v.* Indirect Taxation, illustrated from Financial History of England, France, and Germany. (iv.) A Special Study of the Income Tax.

27. The Theory of Local Taxation.

28. Local Expenditure and Finance in England.

The subjects of discussion will be:—Modes of Borrowing and Repayment. Classification of Expenses, and how they are defrayed; and similar matters. The class will be supplementary to the one on Municipal Enterprises.

29. The Incidence of Taxation.

#### POLITICAL SCIENCE.

##### SPECIAL CLASSES CONFINED TO FULL STUDENTS OF THE SCHOOL.

##### FIRST YEAR'S COURSES.

30. The Structure of the Modern State.

This course will extend over three Terms and is intended to supply a general introduction to the study of contemporary politics, so far as concerns the organs of the State and their relations. The treatment will be analytical rather than deductive, and will involve a constant reference to the experience of modern political communities. The principal points that will be discussed are the following:—

I.—The General Characteristics of a Modern State. The Meaning of Sovereignty and the Question of its Location.

II.—The Organs of Government.

1. The Legislature. (a) The Representative Assembly; Extent of the Franchise, Nature of the Constituency, Methods of Voting; Election Machinery; the Relation of the Elector to the Representative; the "Initiative" and the "Referendum."

(b) The Question of a Second Chamber and its Composition.

2. The Executive. (a) The Political Head; various Types in the various Modern States. (b) The Subordinate Officials; various Methods of Appointment, and their Advantages and Disadvantages from the Administrative and from the Political Point of View.

3. Relations of the Executive to the Legislature. (a) Various types of "Parliamentary Executives." (b) Various types of "Non-Parliamentary Executives."

4. The Judiciary and its relation to other Organs.

III.—Local Government. Centralisation and Decentralisation; the Composition of Local Bodies, and their Control by the Central Authority.

IV.—The Federal State, as it appears in the modern world.

Text-book.—W. Sidgwick's *Elements of Politics*. Other books and authorities will be referred to as the Course proceeds.

### 31. Modern Local Government: Its Structure and Working.

A systematic course of instruction will be given in this subject extending over a period of two years. The first year's course will be largely descriptive; it will deal with the more elementary principles and the less disputed branches of municipal science. The same general divisions of the subject matter will, however, apply to both years. It is proposed to discuss, in the first Term, the Electors and the Elected; in the second, the Municipal Civil Service; and in the third, certain supplementary and subsidiary problems, such as the relation of the government of a metropolis to that of a provincial town. The method pursued will be the following. An outline will be given of the system of Local Government as established by law in England. The outline will be filled in by illustrations drawn from the recent experience of different local authorities in different parts of the country. At the same time parallels and contrasts will be taken from time to time of corresponding uses and institutions in the American and Continental systems.

### SECOND YEAR'S COURSES.

32. History of Political Theory.

33. Modern Constitutions.

34. The Duties of Elected Representatives in Local Government.

35. Municipal Government (Foreign).

36. The Government of London.

## SECTION V.—ATTENDANCE.

(1) 1896-97.

First Year Courses.	For the whole Year.	Michaelmas.		Lent.		Summer.	
		No. of Meetings.	Average.	No. of Meetings.	Average.	No. of Meetings.	Average.
The meaning and use of Economic Terms—morning division.	—	10	No record was kept.	10	7	7	4
The meaning and use of Economic Terms—evening division.	—	10		10	12	7	12
The Economic History of England (Elementary)—morning division.	—	10		10	8	—	—
The Economic History of England (Elementary)—evening division.	—	10		10	9	9	12
Elementary Statistics - - -	—	10		5	6	6	13
Paleography - - - - -	—	10		9	8	8	4
Railway Economics - - -	—	6		9	36	—	—
Banking and Currency - - -	—	10		10	17	—	—
Commercial Law - - - -	—	10		10	10	—	—
Geography - - - - -	—	20		20	13	16	8
History of English Foreign Trade	—	10		10	8	—	—
Local Government - - -	—	10		7	16	—	—
Machinery of Administration (Experimental Course).	—	—		6	17	—	—
Total Number of First Year Lectures - - }	305	126	—	126	—	53	—
Average Attendance -	12	—	—	—	13	—	9

Second Year Courses.	For the whole Year.	Michaelmas.		Lent.		Summer.	
		No. of Meetings.	Average.	No. of Meetings.	Average.	No. of Meetings.	Average.
The Mercantile System - -	—	10	No record was kept.	—	—	—	—
The History of Economic Theory	—	—		6	10	—	—
Some Applications of Statistics to Finance.	—	—		10	15	—	—
Local Taxation - - - -	—	10		11	10	—	—
Political Theories of 17th Century	—	—		6	7	—	—
The Government of London -	—	—		10	10	—	—
The Constitution of Germany -	—	—		—	—	3	7
The Economic History of England in relation to Foreign Countries—morning.	—	10		10	6	—	—
The Economic History of England in relation to Foreign Countries—evening.	—	10		8	7	6	5
The History of Economic Theory—morning.	—	10		—	—	—	—
The History of Economic Theory—evening.	—	10		8	4	8	5
The Methods of Statistics - -	—	10		10	4	9	7
The Methods of Statistics - -	—	10		10	8	9	6
Diplomatic - - - - -	—	10		9	8	9	6
Elementary Theory of Politics	—	6		—	—	—	—
Total Number of Second Year Lectures - - }	233	96	—	98	—	44	—
Average Attendance -	8	—	—	—	9	—	6

1896-97—continued.

Special Courses.	For the whole Year.	Michaelmas.		Lent.		Summer.	
		No. of Meetings.	Average.	No. of Meetings.	Average.	No. of Meetings.	Average.
The History and Theory of Trade Unionism.	—	6	No record was kept.	6	24	6	17
Democracy in New Zealand -	—	—		2	15	—	—
The European Concert -	—	6		—	—	—	—
The International Position of Egypt.	—	—		—	—	1	11
Inaugural Lecture -	—	—		—	—	1	14
The Law of Accident Insurance -	—	—		—	—	1	100
Comparative Study of the Constitution.	—	—		1	75	—	—
Government of India -	—	—		2	54	—	—
Total Number of Special Lectures given	32	12	—	11	—	9	—
Average Attendance -	39	—	—	—	42	—	36

(2) 1897-98.

First Year's Courses.	For the whole Year.	Michaelmas.		Lent.		Summer.	
		No. of Meetings.	Average.	No. of Meetings.	Average.	No. of Meetings.	Average.
Descriptive Economics -	—	10	16	9	8	—	—
The Meaning and Use of Economic Terms.	—	10	15	10	10	—	—
Elementary Statistics -	—	10	17	—	—	10	8
Outlines of English Economic History (Elementary).	—	—	—	—	—	10	19
Paleography -	—	11	5	10	9	—	5
Central Government (Descriptive)	—	9	5	—	—	—	—
The Theory of Politics -	—	—	—	10	6	6	11
English Local Government (Descriptive).	—	8	5	9	5	—	—
Banking and Currency -	—	10	32	10	16	—	—
Markets and Dealing -	—	—	—	—	—	6	16
History of English Foreign Trade	—	10	10	10	17	—	—
Railway Economics -	—	6	59	6	36	—	—
Commercial Law -	—	10	16	10	16	—	—
Geography of Railways -	—	4	28	—	—	—	—
Total Number of First Year Classes	222	98	—	84	—	40	—
Average Attendance -	16	—	19	—	14	—	12



1897-98—continued.

Second Year Courses.	For the whole Year.	Michaelmas.		Lent.		Summer.	
		No. of Meetings.	Average.	No. of Meetings.	Average.	No. of Meetings.	Average.
The History of Economic Theory -	—	—	—	6	5	8	12
The Economic History of England in relation to Foreign Countries.	—	10	8	—	—	—	—
Modern Currency Standards -	—	8	3	6	3	—	—
Methods of Statistics - . . .	—	10	6	10	11	10	6
Methods of Statistics - . . .	—	11	6	10	6	10	4
Diplomatic - . . . . .	—	10	8	9	10	8	5
Municipal Enterprises - . . .	—	—	—	—	—	8	15
Constitution of Second Chambers in Europe.	—	—	—	—	—	—	—
French Constitution - . . .	—	—	—	—	—	—	—
Theory of Taxation - . . .	—	—	—	—	—	8	8
The Referendum - . . . .	—	—	—	3	9	—	—
The Government of London -	—	—	—	10	14	—	—
The City of Vienna - . . .	—	—	—	—	—	3	7
Local Taxation - . . . .	—	—	—	8	13	—	—
Theory of Taxation - . . .	—	11	6	—	—	—	—
Total Number of Second Year Courses . . . . }	177	60	—	62	—	55	—
Average Attendance - . .	9	—	8	—	9	—	9

Special Courses.	For the whole Year.	Michaelmas.		Lent.		Summer.	
		No. of Meetings.	Average.	No. of Meetings.	Average.	No. of Meetings.	Average.
Regulation of Prices - . . .	—	—	—	—	—	2	5
Trade Unionism - . . . .	—	3	42	2	48	—	—
Theory of Bi-metallism - . .	—	2	48	—	—	—	—
Measurement of Economic Quantities.	—	1	59	—	—	—	—
Local Variations in Rates of Wages.	—	1	30	—	—	—	—
Methods of Social Investigation -	—	—	—	1	40	—	—
Palaeography - . . . . .	—	1	30	—	—	—	—
Comparative Study of the Constitution.	—	6	25	—	—	—	—
Jurisdiction in Protectorates -	—	—	—	1	18	—	—
Methods of Amending Constitutions.	—	—	—	—	—	1	54
Principles of Taxation - . . .	—	—	—	2	30	—	—
Inaugural Address - . . . .	—	1	40	—	—	—	—
Total Number of Special Lectures . . . . }	24	15	—	6	—	3	—
Average Attendance - . . .	37	—	40	—	34	—	35

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## THE CURRICULUM OF A GIRLS' SCHOOL.

The scheme of studies in English girls' schools has undergone considerable change during the last thirty years. The ideal that should regulate it has been much discussed,\* and with singular independence of tradition. At the same time the rapid growth of new schools has brought forth a great variety of educational experiment. A primary characteristic in this development is reaction against that old-fashioned ideal of the girls' school in which a round of superficial accomplishments was substituted for a scheme of serious study. The other characteristics are, however, equally noteworthy. On the one hand there has been a tendency to assimilate the girls' studies to those of boys, and on the other hand, this process of assimilation has been profoundly modified by a marked accessibility to new ideas of method and curriculum. In no part of the educational field is there more living thought at the present time than in the domain of the secondary schools for girls. It is therefore a suitable moment for enquiry into the problem suggested by the title of this paper.

This problem presupposes some theory on school curriculum in general, and further raises the question of special conditions to be fulfilled in the case of girls. This second and minor question is apt to bulk so large in imagination that it may be well to consider, as a preliminary, the extent of its significance.

Whether attention be fixed on the end of knowledge to be gained or on the development of intelligence and character to be effected, the practical problem of the school curriculum for boys or for girls is always a complex of many problems, each of which refers to a different kind of girl or boy. The variety of human type is the chief source alike of social pleasure and of educational perplexity. Good education develops and increases this variety, and modern civilisation adds to it further by the complexity of its social experience and the diversity of the industrial ends which it presents. Thus, we have grouped together in the classes of a school learners differing from one another (1) in range of ability, (2) in physical strength, (3) in variety of taste, (4) in diversity of purpose, (5) in moral force and idiosyncrasy of character. The school ought to offer an education calculated to develop each one in accordance with his proper end as a moral, rational, and serviceable being. It is obviously one of the first duties of a good school to recognise these differences as a ground for diversity in the opportunities given.

\* In 1889 the Head Mistresses' Association appointed a Committee to consider and report on questions of curriculum, and the Report of this Committee was discussed in conference in 1890. It is notorious, moreover, that in discussions of educational societies on these questions women take a very active part.

Now, however much the average girl may differ from the average boy in any of these respects, it is certain that in any large group of boys or girls differences as great or greater will be found. A cast-iron curriculum stands therefore condemned. Adaptability and variety are prime requirements, not to be confounded, however, with multiform eccentricity and fanciful choice of class studies. The ideal curriculum being thus of such a nature as to define a central type capable of variation within certain wide limits, it is at least probable, *à priori*, that the central type is not likely to differ much for boys and girls respectively. The most fruitful method of discussion, therefore, is to assume, on general grounds of the similarity in diversity of human thought and knowledge, that the efficient girl is trained on the same broad lines as the efficient boy, reserving the right to consider special divergencies of ideal as we go along.

Moreover, it must always be remembered that beneath all the diversity of human *imagination* is the unity of the human *reason* in the apprehension of knowledge. Knowledge being the same to all knowers, the only question is whether two groups so different as men and women shall make acquaintance with different parts. In so far as education is in any sense technical, diversity of knowledge is required in accordance with diversity of occupation. But unless a particular case is made out for diversity, the presumption is all in favour of unity, since, in so far as knowledge *per se* is the end, the best is best for all so far as they each can receive it. Besides, as we shall see more fully just now, the colour and grace which community of knowledge gives to social converse is an advantage not to be despised by persons whose society is of consequence to each other. In an educated family, or larger social group, there is an immense loss of social pleasure when the minds of the men and women composing it move on different knowledge planes.

As regards the technical phase of the problem, it should be noted, first, that the chief special function of women is the making of the home and the preservation of the social side of society; and, secondly, that the wealth-making business proper to the man involves more diversity of purpose and training than the home-making business proper to the woman. This reflection suggests, in the first place, that respect should be paid in the girls' school scheme to ultimate efficiency in the housewifely and social art, and, in the second place, that we may here expect to see the ideal curriculum in its simpler and more universal form.

Reference has already been made to the great diversity of intellectual talent and physico-moral vigour with which the school has to deal. In treating this diversity it is better to rely more on individuality of observation than on complexity or organisation. It is best to maintain the central ideal of a balanced scheme of culture, and make particular exceptions, classifying under secondary ideals, when necessary. There is perhaps less diversity of kind in the girl's proper aim than in the boy's, but more diversity in her degree of physical vigour. Thus a



very broad and elastic system of classification, based less on variety of subject than on extent of curriculum, is found by experience to work well in the girls' school. The girls are, in fact, classified according to their working power—this being a resultant of their mental and physical ability, their intellectual interests, and their home influences. Thus, besides the exceptions to be treated with discrimination on the borders of each class, there are two large classes. The first is of girls fit to carry through a complete course of study planned to fulfil a well-balanced ideal of knowledge and development. The second consists of girls who are only able to fulfil this ideal in part. The school should be planned so that neither of these two spoil the intellectual development of the other. The second class will no doubt diminish as improvement in educational organisation and public opinion eliminates the large number of girls in secondary schools to-day whose education has been neglected up to the age of 12, 13, 14, or even 15. But this class, large or small, will continue to exist under the most favourable circumstances, and it may be provided for by a scheme of bifurcation based on the distinction between the full school course and a more limited course specially adapted to stimulate more limited powers to their full development. Nothing tends so surely to depression, stupidity, and, at last, indolence as education on a standard hopelessly out of reach; and learners by no means really stupid are apt to find themselves in the demoralising position of the dunce, if working under the same scheme with others whose ability for knowledge is of a higher order than their own. Learners with less ability for knowledge may have ability in other ways, and this should count to their credit in some way as members of the school community. A girl who can—or can be taught to—cook a dinner, make a dress, order a household, entertain a company, and carry on the family correspondence well, ought not to be dulled by devoting her whole working time to a prolonged and well-nigh hopeless struggle with a mass of intellectual mysteries. Nor should her clever sister, to whom these mysteries are as plain daylight truths, be restrained from their study because they are too high for some.

Thus there should be room in the most ambitious girls' school for a simple unambitious course, rather old-fashioned in the end proposed, but using to the full all reforms of method, and carried out with thoroughness of scholarship as far as it goes. Such a course would make much of the attainment of a sound foundation knowledge—not too detailed, but clear in outline and vivid in portraiture—of the English humanities, *i.e.*, English literature, history, and general geography. In connection with geography might be taught some general history, as will be shown more fully later. Arithmetic, with some mathematics, preferably geometry, form the second group. Here the snares to be avoided are, first, over-elaboration of elementary work, and, secondly, the substitution of memory for intelligence, and—as better, but still bad—passive understanding for active discovery. The courses should be extended enough to give some broad and interesting



conception of the subject, and should be simple enough in type to make this possible, leaving at the same time an open door through which the learners can see that there are large and difficult developments of the subject beyond their range. The treatment should be suggestive, stimulating invention in method and requiring independence of thought. These are, of course, commonplaces of educational method, but I dwell upon them here as peculiarly essential in dealing with the limited curriculum. In the third place, some natural science, such as botany, should be included, and some semi-scientific studies, such as hygiene, domestic economy, physiography, claim a place. On the value of these subjects more will be said hereafter. Fourthly, besides the mother tongue, two, or perhaps only one, modern language should be taken. For two languages French and German, for one French is an obvious choice. The time-table should allow for two, and the more backward pupils be allowed further remission, either for the whole or part of their school course. It is often desirable to concentrate the school studies of such pupils for a year or two to a minimum, with strict requirement to attain a standard in these. A class working for a pass in junior or senior local examinations is in this position.\* In respects other than these the incomplete does not materially differ from the complete curriculum. Religion has the same time in each, and for the miscellaneous group of art, handicraft, and gymnastics, such divergence as exists can best be treated later.

The complete is not more important, but it is more interesting than the limited course. To its consideration we may now proceed. The following division of the curriculum is suggested, making three main branches, each with sub-divisions, besides the single branch of religion and morality:—

I. Humanities—

- (a.) Knowledge of the world and the history of humanity.
- (b.) Letters, *i.e.*, language and literature.

II. Science—

- (a.) Mathematics, including arithmetic.
- (b.) Physical science.
- (c.) Natural science.

III. Art—

- (a.) Drawing.
- (b.) Music.
- (c.) Gymnastics.
- (d.) Handicraft.

IV. Religion and morality.

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\* These classes are marked in the appended time-tables. The senior fifth form pupils are in three groups, a higher and a lower senior local class, and a London matriculation class. The latter corresponds to the full school course. In the North London Collegiate School (girls) a junior local examination is taken, saving some exceptions on special grounds, by each pupil as she reaches the age, and it thus serves the purpose of a standard school examination. There are two classes, however: one working on the full school course, which the examination is not allowed to interrupt, and the other on a curriculum strictly limited to its powers.

Speaking generally, Branch I. overshadows Branch II. in the earlier stages of the curriculum, but this position is not maintained as the course advances. Branch III. is about equally important early and late—(*a.*) being more important early and (*d.*) more practicable late. Four very diverse subjects are here classed together because they involve the use of executive organs—are forms of doing or achieving some sensible end by the use of hand, eye, vocal organs, ear, or limbs. They are effective in training the bodily mechanism to a higher degree of general fitness, and direct it in particular to the achievement of certain generally useful ends.

#### HUMANITIES.

In the teaching of history and geography there is special danger that the outlook shall be too limited and the detail too elaborate. The subject is immense, and the learner should never quite let go the conception of its immensity. Without a feeling for the vastness of space and time and the unimaginable variety of their contents, there can be no true sense of far distant time and greatly different place. The sense of the whole stimulates the imagination at each particular point, and is the motive source of interest and inquiry. On the other hand, too much detail stifles the imaginative effort to apprehend it, and so the memory overdriven sinks under a load of words.

Relatively to his other powers, imagining is very easy to the average child, and most children take to geography in any reasonable form, even as a mere knowledge of the map. In the early stages, some time, but not too much, should be spent in teaching the child the meaning of a map by getting him to make maps from his own knowledge—maps, not only of the schoolroom, the garden, the playground, which should be drawn to measurements accurately, but rough maps also of the route from home to school, the neighbouring roads, and the district, after the fashion of the ancients when they tried to draw the world. With this practice should go modelling in clay, first of known, then of described places, *e.g.*, the playground and the Thames Valley.

But this map-making may easily be overdone. The chief motive to be used is the child's immense curiosity concerning the unknown places about which he hears and wonders. Common talk should be the basis of first lessons in map reading, and this basis can easily be extended to include the main divisions of land and water, the most important European countries, and their chief towns, and the home geography in more detail. The talk about places may generally with advantage precede the map, and pictures should accompany it freely. These pictures would help to acquaint the child with the different races of mankind—and their geographical distribution—a subject of great interest to very young people.

From this point the interest in general history takes its rise, as an account of the movement of races on the face of the globe and the consequent changes in the political map of the world. It is most important



that this interest should be aroused and encouraged by the pursuit of inquiry into these changes, framed, of course, on very broad lines. A series of world maps might be gradually discovered to the learner, showing its main political changes so far as our knowledge goes.\* This for ancient history and geography may be done with twenty lessons and ten maps. With these should be associated the most prominent names in history, with some simple but vivid portraiture of character, and some equally simple but clear conception of the lengths of time occupied by the events. For this latter purpose, the symbolic treatment of time as represented by a line, each unit of length representing a year, a decade, fifty years, or a century, according to circumstances, is very useful, especially if the learners make the symbolic diagram for themselves and are encouraged to invent varieties. A good variety given by a school girl of fourteen years is a line down the side to show the length of time through which some condition of things—*e.g.*, a war, or a constitutional change—lasted. Another method for bringing long periods of time within the grasp of the imagination is to represent them on a smaller scale in time. Thus a minute might stand for a year, which would enable a day and night to stand for 1,440 years and bring over 100 centuries within a week. Thus the times of, let us say, the Roman Emperors can be realised by an imaginary procession passing through a palace hall, some slowly and with much retinue, some swiftly and with little. By such uses of the symbolic imagination the weary and barren process of date-learning may be much relieved.

The young child's mind moves between the two extremes of interest in the broad, simple movement of masses of mankind, and interest in the doings of great kings and leaders. This latter interest may be blended with the former; and we should be content with these picturesque aspects of history for a time, postponing the provisions of Magna Charta and the exact grounds of the Civil Wars till a more convenient season.

The history, like the geography, of the British Isles, would then be treated with considerable detail. English history proper is the history of a State, and ought to furnish a standard method for any later studies of the same sort. So far as possible, references to contemporaneous history in Europe should be made, and comparisons suggested with the growth of States elsewhere. For this purpose occasional lectures or courses of lectures must suffice.

It is hardly possible to treat European history in the school curriculum further than by a more detailed course of lessons dealing with changes in the map. A very interesting course can be given of thirty lessons with ten maps, all the maps being, of course, made by the pupils themselves.\*

Some treatment of the history of the discovery of the world should not be omitted, and should come in that early period of life when interest is still fresh in the question of how the world came to be just what it

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\* See Appendix by Miss Burstall.

is. A course on the epochs of ancient history, with maps, as already suggested, in one term, and a course on the history of the discovery of the world, both in broad outline, may be recommended.\*

Connected with the history of the British Isles is the study of the British State as it is to-day. For this a term's course once a year dealing with central government and local government in alternate years, given not lower than the fourth form, proves sufficient. It can be so arranged that every girl is sure to have it in two successive years, and sure to have either course more than twice.

For geography, more important than set studies is the habit of mapping out every route about which one happens to read. Every story-book ought to have a map of the place in which its events occur, and the absence of maps in historical and descriptive books is a perpetual marvel and disappointment. At school, however, there can be maps on the walls, and an atlas in every desk, and the movements of the story or the history can be followed, and further demonstrated by the reader's own home-made charts.

In learning the geography of a particular country the physical features should be noted and realised first—the rivers, the watersheds, the harbours more particularly. The location of the towns in places favourable to their growth, and the divisions of nationality will thus appear as, in most cases, a natural development. Differences between the natural and political frontiers, when such differences occur, will suggest historical inquiry.

Nor should notice be omitted of the chief railway lines and important sea routes. When a particular country is under study the learner ought to be learning, not only that country, but how to deal clearly with all questions involving geography as they arise to him in later life. So it is one of the signs of an intelligent mind to study the railway map as well as the "Bradsheaw." Long journeys should be traced on the globe, and in junior classes it would be well if each child could have a little hand-globe of her own, on which she draws the map of the world.

#### LETTERS: LANGUAGES.

Letters include languages and literature. To the former a preponderant, to the latter often an infinitesimal fraction of the school time is given. As we shall see, however, the two subjects are so closely interwoven that either may be made a vehicle for education in the other. To begin with, it is not necessary to apportion the time very carefully between them, but rather to treat them as one subject in the general distribution of the school time. In the scheme I suggest, as practically workable, six hours, or one-third of the whole time, is usually allotted to languages.† This requires that only two foreign languages should be

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\* For particulars see Appendix by Miss Burstall.

† An important Committee of the Head Mistresses' Association assigns as many as nine hours to Languages, including English. This seems to me too large a proportion considering all the other claims.



studied at a time in the regular school course; though in exceptional cases a third language might be taken in an afternoon class.

The most difficult problem in the curriculum is the choice of the foreign languages to be studied. The criterion of choice in actual use is neither intrinsic nor practical utility, but traditional custom. At least, it is traditional custom tempered by other considerations. Nor is this altogether wrong. In letters we deal with the heritage of past culture to present culture, the common property of all educated persons which is for each acquired by him. To become a member of the republic of letters one must know what other lettered persons know, and it must be remembered that a whole generation of these are in existence defining the conditions whenever an aspirant inquires what he must do to be as one of them. Life may no doubt be very tolerable to persons who despise this inquiry. They may invest their brains and their literary interests in other intellectual goods, and they may do well. But those are not lettered persons who stand thus outside the company in possession.

So we cannot take a fresh sheet and decide *à priori* what the groundwork of letters shall be. It is what it is for each generation, and can only be modified slowly by the growth of ideas. Nor will any ideas serve; it takes literary ideas to re-form literary habits and interests.

Here we have the central fortress of the argument in favour of the classics. The other familiar arguments are but outworks not hard to be overborne. The intellectual training could be got elsewhere. The light thrown on English could be struck out of English itself with half the labour and much more brilliantly. But to cut ourselves off abruptly from Latin and Greek would be to break with a tradition of centuries' standing—a tradition that unites with each generation of scholars the next generation as it rises.

Earlier generations of girls were so cut off. It is curious to note how largely the demand for better education among women has formed itself as a desire to enter into this tradition of letters. No doubt the social instinct had something to do with this. A clever girl, listening to the talk of father and brothers, would resent the limitations of education which disqualified her for a share in it. In most cases she would realise her exclusion as chiefly due to ignorance of the literary tradition which gives a certain flavour to their converse. Thus her ideas of self-improvement would run to Latin and Greek. This was probably a common case, though there would, of course, have been girls more dominated by their original tastes in literature and science than by their social instincts, and other girls whose social surroundings conferred on mathematics or physical science this traditional ægis. Persons desiring education tend to assimilate themselves to the group most appropriate or most approximate to them. The social motive has probably been of more effect in the case of classics than in any other, classics being the instrument of culture most in use for educated Englishmen.

We may conclude that in "letters" most emphatically ques-

tions of sex do not arise. Subject to modifications to be presently considered, the standard of letters is for each generation what the Universities make it, and this entails for the school curriculum a fair amount of Latin and some Greek. These languages must therefore be represented in every first grade girls' school; though it does not follow that every girl learns both or either, or begins very early as boys do, or spends on these subjects the immense time spent by boys. In the girls' school there is, in fact, besides common sense and accessibility to modern ideas, another besides the classical tradition.

It is still true that the really disgraceful thing to a girl is to be ignorant of French. We owe this to the girls' school tradition of forty years ago. In most respects this tradition was too narrow, arbitrary, and low-pitched to be of much service as a guide to-day; but one good practical idea it clearly presented, namely, conversational French. This idea has, in our day, spread to boys, though it is still insecurely grasped in English schools generally. But in girls' schools, whether the teaching be good or bad, French is begun early and studied with much expenditure of time. We shall presently have occasion to justify this practice.

So much for traditions. It is no doubt on them that the language curriculum is really based. Independently of tradition, the case for modern languages grows stronger year by year as the intercommunication of European nations—commercial, scientific, literary, political, and social—increases. In the Middle Ages all educated men had a common language; Europe spoke many languages, but it wrote in one. This was favourable to the communication of thought, though no doubt it retarded thought not a little. Then came the rise of the national literatures, and this rise has tended to separate the nations intellectually, at the same time that in other respects they have been brought nearer to each other. Thus the maintenance of the community of letters and science—to say nothing of politics, commerce, and society—requires that facility in modern languages should be a prime end in education. English education is notoriously weak at this point, chiefly, no doubt, because the English school boy and school girl are backward in realising its importance. More pressing than any question of method is the problem of bringing the idea of speech in a foreign tongue home to the child's desire as an end.

French and German are obviously the ground of foreign languages in English education. In the first place, every-day experience makes public opinion familiar with the need of them, and thus they are more readily recognised as desirable ends by the learner. In the second place, they make a good grounding for the study of the other Western languages being respectively typical as Romance and Teutonic. A sound knowledge of French makes Italian and Spanish very easy, and German similarly facilitates Dutch and Scandinavian. In the third place, these two, added to English, put us on speaking terms with our kind over a larger area of human interest than any other two. And lastly, French, English, and German together offer a fine field for the observation—



systematic or unsystematic—of the varieties in structure and phrasing that reflect the wonderful multiformity of thought. The student whose ideas of language are derived exclusively from the study of Latin and the unreflecting use of English is far from realising the wealth of the resources of human speech.

As between French and German, French should lead. If we are to be ignorant of either it is obviously more inconvenient to be ignorant of French. Also it is much more difficult to learn French for the first time late in life, because, while German presents just the ordinary difficulty of getting it into one's mind, French presents quite peculiar difficulties of getting it on the tongue and ear. French should therefore be begun very early, when imitativeness counts for very much and the false shame of making errors in speech counts for very little; and at this stage no pains should be spared in training the ear and tongue. The difficulties of the badly trained adult in speaking French in France or Switzerland are (1) to pronounce it with some approach to native grace, (2) to apprehend the sentences spoken to him, (3) to translate what he wants to say from English idiom into French idiom, since both languages abound in roundabout phrases. German, on the other hand, is easy to speak, easy to hear, and much more direct in the phrasing of simple thoughts than either English or French. For these reasons, it seems to me that the Gouin method, up to a certain point, is peculiarly appropriate and even necessary in the case of French, as, besides the practice it affords in hearing and speaking, it tends to form the habit of thinking in the language and thus phrasing in the foreign idiom without translation.

I would therefore maintain for French its traditional place in the curriculum, introducing German after it as early as may be. For German the chief object in the earlier stages should be, I think, to lay a very broad and solid foundation of vocabulary. German is an extraordinarily picturesque language; its big words are expressive because their dependence on its little words is always clear. Also it builds a word where in French or English it would be necessary to make a phrase. Thus the word counts for more in the German sentence and is more interesting. Now, this interest in German words makes it possible to lay a very solid foundation for the after-study of this language in a limited number of the early years before Latin is taken up at all. Simple talk in German—with declensions rigorously correct, for declensions are the *bête noir* of German—and plentiful reading of delightful German stories—proficiency in these accomplishments should be the end. Such accomplishments will not be lost, even when laid aside at twelve or thirteen, to be resumed later.

These considerations are necessary, since it is suggested (1) that the language curriculum should, as a possibility, contain more or less of three languages, if not four—French, German, Latin, and for some, Greek, and (2) that only two languages should be studied at a time. The solution for the four languages is to divide the school course, for those who take four, between German and Latin, French and Greek,

This, in the girls' school where elasticity of amount is so much considered, has to be arranged so that some girls may take three, some two, and some even one language only. The plan is simple enough. At entrance, *i.e.*, at eight years ideally, begin French. At nine or ten years add German. At thirteen or fourteen divide, so that some continue German and some begin Latin. Continue this division up the school, allowing girls—not capriciously, of course—to begin Latin at any stage short of the highest. The entrance of new girls in the fourth and fifth forms may make it otherwise necessary to have a beginners' class in Latin at each stage. Some girls will continue German to the end, and some who take Latin, and are capable, will keep up the modern language in an afternoon class. At fifteen, sixteen, or seventeen, according to circumstances, French may be discontinued and Greek taken, but it appears that this is not done largely. The Greek class is for the most part a last year's class of girls going up to the Universities.

On the whole, this division of time is justifiable. French, though easy in some ways, is difficult both to hear and to speak, and there are difficulties to be dealt with very early. Again the arguments for proficiency in French are still stronger than those in favour of any other modern language. Moreover, if Latin is to be learnt at all, the postponement of its study to the age of thirteen is, to a great extent, compensated by early proficiency in its daughter language, French. To men who have been trained on Latin it is a commonplace that the previous study of Latin facilitates the acquisition of French. Women who have been trained on French know similarly that familiarity with French and English facilitates the study of Latin. Space forbids that I should here reiterate the arguments in favour of postponing the study of the ancient to that of the modern languages. Let it suffice to note that the latter are an efficient preparation for the former, and also that the learner enters upon classical studies with much more interest and zest in the second, as compared with the first, period of his school career. As between French and German it should further be noted that English contains a preparation for German which makes its later acquisition comparatively easy.

It remains to say a few words about that study of the mother tongue which is so much less regarded in England than in France and Germany. In the English girls' school, however, there is much writing out of lessons—often too much—and a great deal of indirect teaching of English is thus effected. The danger is that a great deal of slovenly English will be allowed to pass by the teacher whose mind is bent on the matter of the subject. Some direct teaching is therefore essential, though it is a vanity to waste the precious school hours on the specialist study of grammatical elaborations and linguistic archaisms, however interesting. The school study of the mother tongue should not become either logic or philology. The problem is the very practical one of using the native language, either in speech or by pen, so that we may *express* whatever thought we desire to express to the understanding and satisfaction of other persons. Pronunciation and accent, as well as



grammatical construction, require attention, and the exercises should be such as to bring each child's power of expression into play. Reading and recitation may be often simultaneous, but the teacher should also hear the children separately and keep note more especially of those who require individual attention. Special faults of speech should be studied with the care appropriate to special physical defects, and curative exercises prescribed and supervised as far as possible. Even the Cockney accent might be purged away—since no one desires to retain it—if we had a generation of teachers all capable of the necessary diagnosis and prognosis.

In the early stages at least, lessons in English might better be called lessons in English speaking and writing; and the child can learn all the English grammar that is necessary in connexion mainly with her own and her companions' efforts of expression. More difficult questions of grammar, especially analysis, may be dealt with from time to time in the reading lessons, and this whether the reading be in English or some foreign tongue. Much English grammar must indeed, in the secondary school, be learned in the foreign language lessons. English composition, too, appears in the written exercises of translation from Latin or French, so that in the second and third stages of school life the little time that is spared for English may well be spent at first in directing and forming the literary taste, and later in a more advanced and reflective study of the language as a literary instrument, so far as time permits.

The idea of treating English through literature should, in fact, prevail throughout, and literature should, in the French sense, be understood to include the idea of personal literary production. The simplest story well told by a twelve years old child is in its way a literary product, just as the fairy tale she delights in at five or six is literature from her point of view. If she learns to appreciate Hans Andersen fully at ten, she is on the way to enjoy Scott at twelve, Milton at eighteen, and Shakespeare indefinitely.

One of the child's literary instincts is much neglected in schools. I mean the instinct to write in verse. Yet if there were a little less Latin verse and a little more in English how much better it would be. We should not have a larger number of poets, but we should have a larger and more critical audience for the few—an audience apt to be impatient of halting metre and slovenly rhyme. Moreover, the exercise of writing in verse improves the ear for prose and facilitates choice in words.

#### LETTERS : LITERATURE.

We have seen that English could not be considered under the heading of languages without reference to literature as both end and means. Nevertheless there is more to be said on literature in general as the crown of literary studies. The first rule to be observed is that nothing should be read in any language that has not positive worth. Hence it

follows, as an obvious corollary, that the choice of books to be read in French and German should, from the first, give some insight into the literatures of these languages. In particular, the use of the German fairy tale is obvious at the outset. Later, the standard authors in each language should come into use, and the choice of books should make an attempt to show—or at least suggest—the characteristic excellence of each language as a literary instrument, the elastic strength and picturesqueness of German poetry, the inimitable grace, and the clearness for logical discourse, of French. One must read science in French in order to realise its beauty, and poetry in German in order to know how directly it can say its say. In the higher classes, the object of language lessons should be, in the main, to read and appreciate the foreign literature, though a term spent in reading foreign newspapers would be very well employed.

It goes without saying that a similar care should be taken, only more stringently, in the choice of classical authors, so that what is read should be better worth reading than anything else that it is possible to read. To many learners Greek is made easy and delightful from the first by the attempt to read the New Testament in the original.\*

But for literature we are mainly concerned with English literature. Here we set clearly before us two ends with happily the same means to both. (1) There should be read at each age, for the sake of *knowing* them, all the best books suited to that age. (2) We should aim at the development of genuine literary taste, appreciative and fastidious—not a taste that will proclaim itself in a premature habit of analytic criticism, but one that will show itself, as a taste should, in choice and enjoyment. In later life the critical ability may exist in a sense without the appreciative taste, and it is much less valuable in itself.

To fulfil this dual end the first step is one that depends on the parent more than upon the school. It is to make a holocaust of all stupid books, and I use the word "stupid" in the sense of the child with sound literary taste who thus condemns all that he does not think worth reading. No book should be read by a child that has not positive merit, lest time should fail to read and re-read all the real gems. Among the gems are included many fairy tales, nursery rhymes, stories of adventure, heroic romances, novels, as well as the masterpieces of English literature short and long. Indeed, I am assured that the fairly common adult defect of literary taste arises in part from neglect of nursery rhymes and fairy tales, with premature introduction to Milton, and perhaps even Shakespeare.

It is by no means desirable that a child should get all or even most of his literary cultivation through lessons. On the contrary, it is of the very essence of literature that he should read it and choose it for himself. But the school can stimulate and help his choice. In the first place, there can be a school library and every facility to read all

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\* It has occurred to me that a learner with mathematical tastes might be much pleased and attracted by a copy of Euclid in Greek.



that should be read. In the second place, there can be in the school a series of literary societies to meet occasionally in the afternoon, discuss books with the teachers' help, suggest books, and stimulate interest with the effect of getting certain courses of reading done by all. Much private reading may in these ways be brought about, and occasional lessons, or courses of lessons, on some of the books read would be a useful supplement.

In the second or later stages the regular study of some literary work should be taken in class, though not necessarily during all three terms of the year. A prose work might be taken sometimes, but it is much better worth while to take poetry. To some learners the social stimulus is almost a necessity for poetry, and the poetic form offers more definite material for a lesson than is to be found in prose.

As has already been hinted, there is some danger of deadening literary interest by endeavouring in a lesson to show readers what they ought to enjoy. A good lesson may, however, be invaluable as drawing their attention to what they ought to observe in order that enjoyment may be possible. First, there is the story, the movement of events and their dramatic sequence, including the gradual unfolding of character in the persons. Then, as much more likely to be obscure and patchy, there is the scene of the story; this calls for a definite effort of imagination which never ought to be omitted. In the third place, the lesson needs to dwell on the imagery of the narrative, boldly handling and pressing home every metaphor, putting its freshness and sincerity strictly to the test. Sometimes it may be found that the metaphor is not true, that all parts of it will not stand looking at together.

The lesson may do much also for the appreciation of metre and rhyme, and the cultivation generally of the literary instinct on its oral side. Great care should be shown in the choice of passages to be learnt by heart, so that they may be attractive at each stage, as well as worthy; and great advantage will be found in learning poetry by heart simultaneously in class. Those who have not tried this simple method will be surprised at the effective result that can be obtained by a quarter of an hour spent in analysing a piece of picturesque and musical poetry and repeating it, teacher and class, together several times. The class should then be told to repeat it over and over, each to herself, through the day, and a call may be made for it the next morning and every morning, at odd times, through the week. Whatever poetry is learnt should be called for and repeated again and again, the object not being to remember it for a day or a week, but as a permanent literary treasure. The class learning of poetry has, it should be noted, the effect of bringing the unrhythmical ear of the backward learner into line with the best in the class without apparently retarding the latter. It would be well also for the teacher, every now and then, to take a piece of which she is ignorant and learn it with the class. The application of class learning to foreign poetry is, of course, obvious. The average child needs some teaching to make him feel even the swing of the words in

a foreign tongue. The difficulty of French poetry is such as to call for special treatment.

#### SCIENCE.

There is a sense in which it might be said with truth that the scientific interest emerges in a child's mind almost as early as the literary and human interests. But though the interest arises early, the power to satisfy it develops much more slowly, so that the progress made is comparatively insignificant, even when the time spent is considerable and the methods sound. This is in striking contrast to the state of the case in regard to the humanities. For it would not be too much to say that, in certain aspects of literary taste and ability, the neglect of these subjects in childhood can never be compensated in later life. It is not the child's fresh memory only that we cannot afford to refrain from using. It is the child's peculiar delight in the power of words, his docile imagination, his rejoicing wonder, his endless curiosity. All these are ready for use, and will not flag if he is not puzzled by knotty problems beyond his strength. Such problems he likes very well to raise, but a real attempt at solution is much too fatiguing. Very young children like to know, but the labour of science is not for them.

Nevertheless, the scientific interest exists, and should not be left quite dormant or undirected. It should, at an early stage, be brought into relation with the child's very real powers of observation and his capacity for receiving and retaining vivid impressions of concrete things. The youngest children of school age are capable of elementary work in natural history, a certain groundwork of friendly acquaintance with plants and living creatures being better obtained in childhood than later. Such work at the beginning can hardly be called natural science, but it is of the nature of science if rightly carried out. An hour a week, increasing to two hours, may thus be profitably spent. At eleven or twelve children are ready to take a further step, and enter on physical science by very simple experimental investigations of the properties of matter. For such work a room fitted with gas and water and suitable benches, is, of course, necessary. Balances also will be required a little later on.\*

Thus, even in the junior school a beginning may be made with natural and with physical science, great care at this stage more particularly being taken that the method of knowledge, no less than its result, should engage the interest and form the mind. Throughout the same stage mathematical science is represented by arithmetic, a subject that young children find both easy and attractive when they are trained from the beginning to deal with number always by their own synthetic activity and never by reliance on verbal memory. There is no end to the harm that can be done by setting children to learn the multiplication table by heart. The mischief is so great because, at the very outset of the little scholar's mathematical studies, a wrong ideal is thus set before

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\* See Appendix by Miss Aitken.



him, and a fatal habit of unintelligence enjoined. On the other hand, a sacred regard to intelligence in arithmetic leads the way to soundness throughout in mathematical work.

Before proceeding further with the development of the curriculum in science, it is necessary to inquire into the educational end proposed under this head. Here the influence of tradition is a vanishing quantity, and we are free to determine on first principles the choice of scientific studies. The only preliminary is the determination of a criterion of choice.

In discussions on this subject, science is apt to be treated too much as a mere means to intellectual efficiency. Teachers sometimes say that the end is not *knowledge*, but the training of ability by the *achievement* of knowledge. There is much to be said for this doctrine from the teacher's point of view, but from the learner's standpoint it is obviously untrue. The learner is a *true* learner in proportion as he desires to *know*—to understand the world about him. He can easily see that intellectual skill is necessary for the acquisition of knowledge, and he seeks it as a means to his end; but if the means is made to obscure the end the learner's interest will flag, and after all it is the learner, not the teacher, who is everybody. The learner's "craving to know" is the chief means to knowledge and to training in ability also.

The teacher must, therefore, concede to the learner that knowledge is the end. It is, however, his business to see to it that the learner's haste does not cause him to grasp at mere information, to the neglect of the reasoned knowledge that includes its achievement by labour and thought. In securing this he also secures that growth of intellectual skill which is, as he knows, the earnest of further growth in knowledge by and bye. Moreover, it may be granted that in the determination of the science curriculum according to knowledge values in the main, we cannot leave out of account the effect of certain studies in developing the intellectual character that facilitates other studies. In fact, the two views of the end cease to be opposed when knowledge is conceived as science, the system of reasoned knowledge in which each fact and its process of discovery are seen together. Opposed to this is the dogmatic enunciation of scientific facts, than which nothing can resemble science less.

Our question, therefore, may be stated thus. What are the elements of such a grounding in science as can be aimed at during school life? The idea of a ground science will help us here, though we must remember that the school can only deal with the groundwork of the ground sciences. These are the sciences on which *all other scientific knowledge is based*. Now, a science may be a ground science either objectively or subjectively. For instance, physics beyond the most elementary stage presupposes mathematics, and even the naturalist will be apt to slur over some points if altogether ignorant of mathematical law; thus objectively mathematics enters into all science—is part of the ground of all. On the other hand, we might argue that mathematical training is subjectively one condition for the formation of a mind able to deal

with any matter scientifically; and the same may be said for the naturalist training to careful and dispassionate observation, and of the experimentalist training to measure and test, to invent and watch. Genius can be scientific without training, it is true, but few have genius, and no one can deal with all the common problems of life satisfactorily who does not inquire into them scientifically. Thus the grounding in science has import outside the range of science proper.

From the objective point of view there lies at the root of all scientific inquiry into natural phenomena knowledge of the fundamental principles of mathematics, physics, chemistry, biology. The claims of mathematics have already been noted. It remains to emphasise the truth that there are as many as three other perfectly distinctive claims, each bearing many branches. Physical law, and chemical law, and biological law have to be studied each for itself, before one can begin legitimately to speculate on the interchangeability or other relation between their manifestations. Such inquiry lies outside the school curriculum, except by way of suggestion as occasion arises. The various branches of physics, on the other hand, may be dealt with in the elementary stage, so as to indicate their underlying unity; hence arises the conception of general elementary science which is now rapidly taking hold in the schools. In this conception physical inquiry in reference to the properties of material objects takes the lead, and chemical inquiry comes in as more complicated problems involving change of substance present themselves. A course of general elementary physics, starting with easy measurements and leading up to chemical problems, and eventually to chemistry, thus suggests itself as the ideal of the school curriculum in physical science.\* It is better, in my judgment, to carry on chemistry for the elder students as a special study than to pursue any of the physical branches to the same extent.† Higher physics demand good mathematics, and the school time of the student intending to specialise in science is better spent (1) in statics and dynamics mathematically treated, and (2) in more mathematics, including the easier elements of the differential and integral calculus, than in getting a little further with physics proper. All the senior students of the complete course should take some applied mathematics as an essential of science groundwork. In the time-table I allow two hours for this purpose in the class below the sixth.

In a purely logical scheme of science study, suitable throughout for able adults, biological science would follow physics and chemistry. But for the weakness of human nature it is necessary to take account of psychological, or, as I have called them, subjective considerations, and to allow that the foundations of biological science, which call more for observation and vivid perception than for calculation, should be—because they can be—laid early. Considering the science curriculum from the subjective point of view, we see that the necessary groundwork

\* See Appendix by Miss Aitken.

† Also it is not easy to have a physical laboratory sufficiently good for advanced work in an ordinary school.



is ability to observe and compare, to measure and calculate, to infer and demonstrate, to inquire into causes, to invent means, to choose ends. Mathematics (pure and applied) and general physics suffice for the training of this manifold ability, but for the very young and the backward they are too hard and much too dry. The little child who, between eight and eleven or twelve, has been gently trained to observe natural objects with accuracy and interest, and to calculate arithmetically with some reference to real things and their measurements, is prepared to enter on the stricter course with sufficient ease. The course already sketched for the juniors is therefore desirable. Then there are the backward pupils and others, including those entering school late, who require the limited course. These will get their best chance of science in the long run by the pursuit of botany and natural history as regular studies, with occasional courses on quasi-scientific subjects, like hygiene, for the sake of the interest and the practical information.

The importance of keeping the school curriculum in touch with the practical interests of life must always be borne in mind for the learner whose capacity and temperament require some remission of the stricter intellectual demand. In such cases there will not be attained any comprehensive conception of science nor any universal groundwork of scientific thought; but, far short of this, it is possible to acquire a habit of dealing with all questions scientifically, and this habit should be developed in the school. For the practically-minded learner it can well be developed, in part, by the application of accepted scientific truths to common life, even though the truths be taught—not scientifically, but dogmatically. Herein lies the training value of hygiene as a study inferred from physiology. The inference is scientific, though the premises are dogmatically given. There should be going on at the same time, or in adjacent terms, a course of reasoned botany, and the contrast between science and the application of science should be noted for the further inculcation of sound ideas on the nature of scientific knowledge. For even very dull learners can be taught to know where and how it is that their information falls short of the ideal of science.

All the pupils should, at some period of their course, deal with the application of science to life in some form. For the intellectual mind sometimes is dull in practice, just as the practical mind sometimes fails to understand its end and means for lack of intellectual skill. Hence we see occasion in the higher classes of the complete course for short series of lessons, during one term, on hygiene and domestic economy, whereas more time, and at an earlier as well as later stage, should be given to these subjects in the limited course.

Into the teaching of handicraft also there enters the idea of applied science. Measure in needlework and cookery is the surest mark distinguishing the educated from the uneducated mind. And, in general, it would perhaps be not too much to say that in all handicraft there is one part applied science to two parts manual skill.

It is interesting, though obvious, that in so far as the girls' school touches on the application of science to practice, its curriculum differen-

tiates from the curriculum for boys. This is the only ground for differentiation in kind that I can find. It is important enough, but its effect on school studies is inconsiderable.

#### ART.

Doing, as well as knowing, is included in the educational end. We have seen how, in applied science, knowing is a means to doing, and thus the desire to do stimulates, or may even create, the desire to know. Doing is, in fact, a means to knowing; as, for instance, when the desire to draw an object leads to the careful observation of the same. Doing is the expression of desire regulated by knowledge and thus causing the formation of knowledge as the end causes the means. Thus speech, drawing, carving, modelling, express and thereby form our thought.

In the secondary school there is not much room for handicraft, with the ample literary and science curriculum that has been described so far. But in two ways something may be done to develop skill of hand and eye, it being remembered that, at the most, school handicraft should aim at a grounding only in the manual arts.

Drawing is the most universal of the arts engaging hand and eye. Some pupils there will be in every school who should learn to draw in the artist's sense; but all should learn, as a part of general education, up to a certain point. Compulsory drawing should thus be part of the curriculum of the junior school, and later take rank with the extra afternoon subjects for an hour and a-half or two hours, once a week. In these afternoon classes special talent would have its chance, and every chance of excellence by opportunity and encouragement should be given to it.

Needlework may be treated somewhat similarly as regards the actual distribution of time, but on different principles of valuation. In it we have the one manual art which should universally form part of the equipment of a woman. The custom is to suppose that for secondary school-girls this art is acquired at home, and, when the home does take and fulfil this responsibility, nothing could be better. It is a weakness in the home when this is not done; but, on the other hand, it must be admitted that the school girl's absorption in school requirements raises some difficulties. I think, therefore, that the school should do something in recognition of needlework as part of a polite education. As one way of doing this, the following plan is suggested.

Let there be a lesson once a week in the junior school, with homework and marks as for other lessons. When this is discontinued, let there be a sewing meeting—it may be for charitable work—once a month in the afternoons, with marks assigned, and also let there be a sewing examination once a term. Thus, though a middle or senior girl is not much instructed in sewing at school, she can improve her school position by learning at home to sew well. Also, she is assured that the school pays respect to the feminine art.

In the second place, it must be remembered that our typical school contains girls who are not fitted to go through the complete school



course in its entirety. Such girls may do very well in handicraft, and for them opportunity should be provided for excellence in simple carpentering, dressmaking, millinery, cookery—not in all these at once, but in some one at a time or several in succession. Every girl should, if possible, be good in something, and some will never be more than passable in intellectual studies. But there are other powers than those of thought, by the development of which a girl may make her world more comfortable, more beautiful, and more humane.

*Music.*—It is not necessary that every girl should learn to play the piano or the violin, but some musical training is certainly of universal desirability. Class singing is obviously the universal subject in this section of the curriculum, since it supplies some training of the most primitive and natural musical instrument, cultivates the musical ear, and leads in good hands to an elementary knowledge of musical structure, and a sound appreciation of musical effect. Every good school should, besides singing classes, have a picked choir doing advanced work, a choir of which the school is proud, and whose work is a stimulus to all the junior singing classes. There are similar advantages, it may be noted, in the formation of a string band, and, indeed, in the organisation of concerted music in any form. Musical appreciation in those who have little musical execution is no insignificant gain.

*Gymnastics.*—In a country where the town population predominates, physical education is not to be despised. For it, therefore, a corner of the curriculum must be claimed. In no subject, however, is the inequality of fitness and of need more obvious. Some by defect need physical training much; some by strength and agility claim an outlet in athletic exercise; while the average girl between these extremes needs it and desires it in moderation. On the other hand, and contrasted with all these, are the girls who for a time, or throughout life, require, on account of special delicacy, exemption from violent exercise altogether.

In order to make the necessary classification, it is obvious that medical inspection is required. It is the business of the medical inspector, who should be a woman, to point out the girls who require remedial gymnastics on account, speaking generally, of tendencies to asymmetrical growth. These should be dealt with in a special afternoon class, once or twice a week, according to circumstances. In the second place, the medical examination is directed to ascertaining the cases in which gymnastic exercises should be wholly or partially forbidden. Subject to the limitations thus prescribed, gymnastic exercises claim a place in the morning time-table as a compulsory subject, and in this, as in all other subjects, it is most important that the teaching should be excellent in proportion as the time is short. I will not here attempt to enter into the controversy between different systems of drill, which however, excites no little interest in our girls' schools. I will content myself by expressing agreement with the view that athletic perfection consists more in the harmonious *activity* of all the muscles than in the separate *strength* of each, and I note, as a detail not unimportant, that the use of musical accompaniment is a means to the former end,

while the constant reiteration of minute instructions by word of command has an opposite tendency. On the other hand, it is essential that correctness in the action of particular groups of muscles should be attended to with care. To this end the teacher works by setting a model, which the learners imitate—subject to her criticism and correction.

For those who want more than the regular morning calisthenics, there should be a voluntary gymnastic class in the afternoon doing the more advanced work, with all the ordinary apparatus, that such a band of selected athletes can achieve. Of course, for admission to this class, the medical record must be good, and there should either be a lower limit of age or a strict limitation in kind of the work done by the juniors. Some exercises which are profitable for the grown girl involve abnormal strains for the growing child.

The pride of the school, as a whole, in its body of athletes has a value similar to its pride in the school choir, the school orchestra, the school artists, and other manifestations of specialised ability. Thus gymnastic displays and athletic sports have a use like that of school concerts and art exhibitions, as a stimulus to those who do not take part in them, and as conducive to the growth of an *esprit de corps*.

#### RELIGION AND MORALITY.

In the secondary schools there is no religious difficulty. The reason may be that the teacher is left, under the general conditions of the school scheme, to deal with the subject of religion after the manner of his kind, in an educational rather than in a controversial spirit. The doctrines that divide Christendom are not, in any case, very suitable to the intelligence of the child; and the schoolmaster, in adapting the religious teaching of any church to paedagogic principles, will find that for his purposes Christendom is united. If he goes his way sincerely as a teacher and as a religious man, he will find that few parents have occasion to use the conscience clause. In this spirit he will set before himself two ends.

One of these is the teaching of the Scriptures as history and literature—a study of peculiar interest indeed, but still capable of treatment in the same thorough and scholarly manner that would be applied to the study of any other great book. Ignorance of Scripture is a defect common enough, and it is one for the remedy of which the schoolmaster is the natural agent. In the order of things, familiarity with the Gospel story comes first, both in importance, interest, and simplicity, and afterwards the history of the Jews, and the Hebrew Scriptures generally.

But the teaching of Scripture history and literature is not necessarily religious instruction, though I am sure it is necessarily conducive to the development of religious thought and feeling. It becomes religious instruction in the full sense when it is combined with honest, straightforward teaching of the central and simple truths—which are the great practical truths—of Christianity. In the natural order of



teaching the simple practical truths on which Christians are united come first, and at the bottom we probably all believe that they matter most. It is not a little thing if the teacher makes his young disciples reverently and practically familiar with the leading thoughts of Christ's own teaching, the Fatherhood of God, and His call to men to realise the perfection of the sons of God, the universality of God's love, and the brotherhood of men, Christian duty, repentance, faith and grace. Such practical religion may be harder to learn than the most difficult dogma, but the difficulties are not those of the understanding. Its truths, indeed, are easier in some ways to the child than to the adult.

Besides this definite instruction in Christian principles, there is room and need for some simple teaching of every-day common-sense morality bearing on the solution of problems that arise frequently in the family and in the school, and tending to the formation of a stable and practical ideal of conduct on its secular side. This secular teaching of morality need not be very systematic—though it is important that the teacher should have a systematic notion of the end at which he aims—and it should be carefully limited to the child's capacity for interest in it at each stage. But we cannot afford to dispense with it altogether. For almost all it is a needful bulwark of the teaching of religious morality, and there are always some—perhaps many—who can reach to religious ideas most naturally through morality. The Founder of Christianity Himself pointed out that the second great commandment is a pathway by which men reach the first.

The secondary schools for girls in England have for the most part adopted the custom of condensing all the regular teaching into four morning hours—from 9 to 1, or from 9.30 to 1.30. Thus the afternoon is left free for the preparation of lessons, and for the special additional studies which vary according to individual taste and ability. Strong and capable girls can take up one or two such studies with ease. The list includes pianoforte and violin playing, solo singing, senior drawing, gymnastics, cookery, and any handicraft classes that may be taken. For girls who are not strong, care should be taken to keep down the afternoon class demand, so that afternoons, as well as evenings, may be left free for home lessons, exercise, and rest. It is well in all cases to limit the time that may be spent on home lessons, and to require that the time limit shall be fairly well kept. One hour per day for the lowest class, rising to three for the elder girls, is a fair allowance. In some schools each girl brings in every morning a printed paper to show how many hours and which hours she has spent on her lessons. Thus lateness, as well as excess, can be checked.

Thus, only four hours are available for the teaching of the regular school subjects, and from them something must be deducted for the usual light lunch in the middle of the morning, which ought to be followed by the daily short drill or run in the playground. It is approximately correct to say that about nineteen hours per week are available for lessons, including gymnastics; and the accompanying scheme of



time-tables is drawn up on this supposition. The scheme should be understood as offering an approximate solution only to the very difficult time-table problem. It has, however, the merit of keeping close to the facts of the real time-table with which I am most familiar. I have not set down any part of the scheme without satisfying myself that it could be carried out in a school where it is usual to send the pupils through two standard examinations—junior and senior—in the manner suggested on page 4. It will be noticed that the examination classes are marked in the table, and I thought it would be more useful to do this according to the scheme of examinations I know best—*i.e.*, Junior and Senior Cambridge Locals and London University Matriculation.

It is advisable to make allowance for a certain amount of specialisation on the part of some girls during their last year at school, supposing that they reach the end of the regular school course, as above described, before the leaving age. These girls are like the ex-standard children in the elementary schools. They will probably be reading for scholarships, or preparing to go to college in any case. They form the highest class of the school, whether it be called a sixth or a seventh form. I have called it the sixth, and thus the upper fifth stands for the top form of the ordinary school course.

Bifurcation may very well begin in the highest form of the junior school or earlier, but there is no occasion for any substantial difference in the distribution of time until the middle school or fourth form is reached. At this point, Latin and mathematics are introduced, and in practice it will be found that the struggle between classics and science at once reaches its height, and is more acute than later, when arithmetic and French begin to give way. The girls of the limited course, however, continue their way with the studies of the junior school, carried to a much more advanced stage, and to these presently mathematics is added, and possibly Latin later. It should be possible for some of these girls to reach the sixth form at last, to take there a course of higher English, history, and modern languages.

The scheme of school organisation, which I have sketched, requires an amount of subdivision which presupposes large numbers and a well-equipped staff. With small numbers, it is more difficult to classify unless the classes are very small, and, in that case, the number of pupils per teacher being small, the cost of education per pupil is proportionately large. When allowance is not made for this higher scale of expenditure, the organisation can only be made as good as possible under the circumstances. It is better to have efficient teachers with imperfectly assorted classes than inefficient teachers under any circumstances whatsoever; and efficient teachers are naturally more expensive. The desideratum, however, is a staff sufficient in number for the necessary organisation, and equipped with all the variety of talent and attainment requisite for efficiency in every part of the curriculum. Such a staff cannot be satisfactorily maintained at the low costs of education per head which are sometimes quoted as appropriate to girls' schools. If the cost must be low, the solution of the educational problem must

be roughly approximate—or rather inapproximate—to the same degree; and there can be no doubt that every extra pound per head up to £18 or £20, for a large school of 400 or more, is invested to great advantage. The smaller the school, the higher the limit of decidedly advantageous expenditure. In general the difference between the effects of a £10 and of a £20 fee corresponds to the amount and quality of teaching that can be got for those sums. This seems very obvious, but it is easily forgotten in practice. Thirty years ago there was but a very poor supply of women teachers; the cost was naturally low, because the labour was unskilled. In these days the supply of skilled labourers depends closely on the demand, and highly-trained women will or will not be drawn into the schools according as the positions offered them are or are not sufficiently attractive. Moreover, it costs more to maintain a higher standard of efficiency in the teacher, even apart from the fact that the learner's higher standard gives the teacher more work.

Some considerable economy in classification can, however, be effected by taking such subjects as mathematics, botany, Latin, and German at the same time in two or three adjacent classes, re-dividing the classes into four, five, or six sections, according to the individual attainments and ability of each pupil. This procedure is rendered further necessary by the advent in the fourth and fifth forms of new pupils with very varied acquirements in these subjects. It is not wise, however, to carry it further than is absolutely necessary, for much re-division involves serious waste of time and detracts from the unity of the form-feeling and the form-mistress's supervising influence. The unity of the form and its *esprit de corps* plays no small part in the development of character on its social side. Each form is in itself a little centre of social life and local government, within the wider society and constitution of the school.

SOPHIE BRYANT.

January 1898.

Time-table showing approximately the number of hours per week that may be given to each subject out of a total of 19 hours.

JUNIOR SCHOOL.					SENIOR SCHOOL.									
					A Complete Course.					B Limited Course.				
Form					Lower. IV.	J.C.C. IV.	Lower. V.	V.	Upper. VI.	Lower. IV.	J.C.C. IV.	Lower. V.	Upper. VI.	S.S.C. Upper. VI.
Age					13	14	15	16	17	13	14	15	16	17
					or	or	or	or	or	or	or	or	or	or
					14	15	16	17	18	14	15	16	17	18
														19
Religion and Morality	1½	1½	1½	1½	1½	1½	1½	1½	1	1½	1½	1½	1½	1½
English	-	-	-	-	1	1	1	1	1	2	2	1½	1½	1½
History	-	-	-	-	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½
Geography	-	-	-	-	1	1	1	1	1	1	1	1	1	1
French	-	-	-	-	2	2	2	2	1½	3	3	2	2	2
German	-	-	-	-	2	Alternative with Latin.	3½	3½	3½	2	Alternative with German.	2	2	2
Latin	-	-	-	-	2	3	3	3	3	2	2	2	2	2
Greek	-	-	-	-	-	Alternative with French.	3½	3½	3½	-	-	-	-	-
Arithmetic	-	-	-	-	2	1½	1	1	1	3	3	2½	2½	1½
Mathematics	-	-	-	-	3	3½	3½	3½	5½	3	3	2½	3½	4
Natural Science	-	-	-	-	1	2	2	2	3½	2	2	2	2	2
Physical Science	-	-	-	-	1	1	1	1	3½	-	-	-	-	-
Drawing	-	-	-	-	1	1	1	1	1	1	1	1	1	1
Needlework	-	-	-	-	1	1	1	1	1	1	1	1	1	1
Singing	-	-	-	-	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½
Gymnastics	-	-	-	-	1½	1½	1½	1½	1½	1½	1½	1½	1½	1½
Total per week	-	-	-	-	19	19	19	19	19	19	19	19	19	19
Home Work per week	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pupils can cross over from B to A or *vice versa* at any point. This is facilitated by the practice of re-classification for Mathematics, Science, Latin, and German when necessary.

Saturday is a whole holiday, and morning school lasts for four hours each morning with a break for lunch.

The age given is that of a typical child going through the whole school course.

J.C.C. means Junior Cambridge Candidates, S.C.C. means Senior Cambridge Candidates, and L.U.M. means London University Matriculation.



## APPENDIX I.

NOTE ON THE MORE DETAILED CURRICULUM IN  
HISTORY AND GEOGRAPHY.

BY MISS SARA A. BURSTALL, *Headmistress of the Manchester High School for Girls, late Second Mistress, North London Collegiate School.*

The general principles which should govern the curriculum in history and geography have been laid down in the foregoing text, while the time-table shows the time that can be devoted to each subject. The purpose of this Appendix is to give in fuller detail what the actual work of a class ought to be, the scheme being founded on practical experience.

During the first year of school life stories and myths should form the material of the lessons, the particular subjects chosen being left to the teacher's judgment. Broadly speaking, these should include the legends of our earlier history, such as the tale, "Non Angli, sed Angeli," with the historic element in the lives of Alfred, William the Conqueror, Wallace, Joan of Arc, and other heroes, and should go on to modern times through a series of dramatic episodes, like the defeat of the Armada, the Fire of London, etc. These, as well as some stories from the lives of Elizabeth, William III., George III., Napoleon, and other persons on the stage of history, can be told in language comprehensible to the mind of a child, and must be illustrated by pictures, comparison with the social life of the family and the school, and, perhaps, by the acting of little plays. It is of great importance at this stage to make the children acquainted, if they are not so already, with the Homeric myths, the tales of early Rome, and any other myths of an equally important influence in the realm of culture.

During the second year this course may be continued, and the study of chronology begun, using the method of space diagrams, as explained in the above report. A few dates should be learnt now. In the next two years (ages ten to eleven) the aim of the teacher should be for the child to acquire a simple outline of the whole course of English history, passing over some reigns altogether, such as that of Edward II. or Henry IV., and concentrating the attention on important crises, such as the Conquest. More dates may be committed to memory to settle certain fixed points in the mind, but very great care must be exercised in securing that the *meaning* of the date is understood. A further use of space diagrams and charts will best effect this.

Meantime, the child will have been learning, according to the scheme laid down in the text, the meaning of maps, of simple geographical terms, and the formal geography of the British Isles. During the third year of school, the names of the European States and their chief towns,

products, etc.,—as well as the more important physical features of the Continent, should be learnt. The globe, as showing the shape of the earth, will have been introduced at an early stage; during the fourth year the child can begin to acquire a more accurate knowledge of the great mountain ranges, rivers, etc., of the whole world, as well as some notion of the general configuration of land and water, and of the elements of political geography. The last year of the junior school should be devoted to that wider study of history and geography jointly, to which the text refers. The child has in his mind by this time an outline of the history of his own country, and of the general geography of the world. A carefully-planned course, somewhat on the lines of Syllabus A (see *infra*), will connect all this, and satisfy the natural curiosity of the child. The first term of the fifth school year (when the pupil is twelve years old) is, perhaps, the best time to give such a course of ancient history and geography, consisting of about twenty lessons, with ten maps. Two hours a week are required. The syllabus begins with Egypt, of which the child already knows something from the Scripture lessons, and goes on to treat of Chaldea and Assyria, Palestine being, on the map, and in the child's mind, the centre to which all the new information is referred. When Greece is studied, the Homeric stories are recalled, and when Rome appears, the legends of Romulus, etc. This course ends with the Empire of Augustus. During the second term of the year the syllabus is much more geographical, being practically the history of the discovery of the world from Roman times till now. A series of maps, showing the world as known at successive epochs, forms the material of the lessons, but an attempt may be made to arouse interest in certain great characters who have influenced the history of the world, such as Mahomet or Columbus. This course would take about twenty lessons also, with ten maps. (See syllabus B, *infra*.) The third term of the year should be given to revision, when all knowledge acquired before is carefully collected, and tables or dates, lists of geographical names, etc., repeated. The necessity for this type of school work is often ignored in the reaction against mere memory study. But it has its place, and after the earlier lessons it need not be mechanical or dull.

The child now leaves the junior school, and begins the preparation for the earlier external standard examination mentioned in the text. This will occupy two years, one hour each week being given to history and one to geography. At the very beginning of this stage of work, when the pupil is about to enter on the more precise study of history, a short course of lessons may be given on the duties of a citizen, or civics, as it is called in America. The object of this is to give reality to the history lessons later on, by teaching the child something of the political constitution of the country as it is now. We may note that, as a matter of practical experience, this effect is produced, even at so early a stage.

After passing in due course, and without any exceptional strain or pressure, the external examination or middle standard, at about fifteen years of age, the pupil is ready to begin a simple course of European

history, closely connected with the changes in the map of Europe at successive epochs. This forms an agreeable break in the more precise and detailed English history, and helps to connect all scattered fragments of knowledge gained in reading or in any other way. The course consists in the study of not less than ten maps, and of the lives of great persons like Charlemagne or Charles V., whose doings have affected the map of Europe. (See Syllabus C, *infra*.) The actual number of lessons may vary; thirty at least is required, two each week, the history hour and the geography hour being taken. As a matter of fact, these lessons are given in Form Lower V. in the school of which we have experience. During this stage there comes also a second set of civics lessons, two hours a week for half a term. This and the European history will occupy the time given to geography throughout the year; but if any time is left, the geography of current events may be studied, with the help of the newspaper. It is hardly necessary to say that this source of information is most valuable, and should always be used in class by the teacher, not only of geography, but also of history and politics.

The pupil has now reached the age of fifteen or sixteen, when the mind has developed increased powers, and when many girls seem to take a new interest in their work. It is now that the real study of history may begin. To this end the regular work for the Fifth and Upper Fifth Forms should be a complete course of English history, with the geography belonging to it, which should extend over two years, and cover the whole story of the nation's growth, from the earliest times to the present day. The historical geography, chiefly of the British Isles and the Colonies, can be studied in the first year. Such a course fits in with the matriculation examination of the University of London, or some such second external test in the girl's school career. In any case, some attention should be given to the study of the phenomena of social life and political institutions at different periods, and to the relation of English history to European. For the most of the pupils it will be found possible to again introduce the study of civics by the method of short courses of lessons, substituted for part of the regular work in history during a few weeks, central government being taken one year and local government the next. At the end of the history course, at about the period 1780 to 1880, special attention should be bestowed on the nation's development, not without reference to such contemporaneous events as the unification of Italy and the rise of the German Empire. Throughout this two years' course the details of battles, campaigns, of diplomatic negotiations, and even of Acts of Parliament should be omitted, the stress being laid on broader subjects.

The history work in the Sixth Form depends on the special work a girl may be doing, but no one should be allowed to study history only; some classics or mathematics should always be taken to supply a stricter mental training. As a rule, girls will work for the Higher Cambridge Local Examination, which has an excellent syllabus in history, or for the Intermediate Arts Examination of London Univer-



sity, in which Roman history and English history are required, the latter including the study of a special period. From time to time there will be candidates for the various open scholarships in history given at the women's colleges.

For girls who do not take the complete course in school, but who take what may be termed the limited course, the special studies in history will be governed very largely by the subjects of the Senior Cambridge Local Examination. Such girls will study civics in Form Upper IV., after they have, like the other set, taken the middle standard examination. They may take the European history course also, but it is more likely that they will need to devote all their time to English. The geography done is also settled by the regulations of the external test, special pains being taken with matters of current interest appearing in the newspaper. It is of great importance to secure two lessons a week for the study of history at this stage; the pupils are older and more thoughtful, and can do much better work than they could when more immature.

It will be seen from the above sketch that the curriculum of history and geography here laid down has two aims; to secure a fairly accurate knowledge of the history of England and of the general geography of the world, and also to give a framework of universal history into which the pupil can fit the various allusions met with in reading, and which can be filled in later by study in afterlife. At the same time the requirements of two external examinations are satisfied, and the girl has had the advantage of definitely and carefully working at a special period or course under what is on the whole the valuable stimulus of an external test. Such a curriculum does not give as much actual information as some might wish; but it attempts to suggest lines for further study. It is practical, it allows for the due balance of studies, for the claims of science and languages, which are more important than history in the training of the mind, and it admits without pressure of the passing of two external tests. It has been evolved practically in the attempt to satisfy these various requirements, and in this fact lies perhaps its best claim to the consideration of persons interested in education.

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## SYLLABUS A.

## Universal History in Early Days.

Egypt, Assyria, and Babylon.	6 lessons.	One large map.
Persia, Lydia, &c. (Cyrus, Darius, &c.)	2 lessons.	One map.
Greece in the Heroic Age.	1 lesson.	Map of Mediterranean.
Greece and the Persian War.	3 lessons.	Map.
Alexander's Empire.	1 lesson.	Map.
The Successors of Alexander.	1 lesson.	Map of Syria, Egypt, and Macedonia.
Rome.	6 lessons.	Four maps.
Early Rome ; Legends ; Conquest of Italy ; Rome and Carthage.	<div style="display: inline-block; vertical-align: middle; font-size: 3em; line-height: 1;">{</div>	Showing early Italy or Italy about 250 B.C.
Conquest of the World.		Carthaginian Wars.
Cæsar's struggle for Empire.		Conquests.
The Empire of Augustus.		Empire of Augustus

Total.—20 lessons and 9 or 10 maps.

## SYLLABUS B.

## The History of Discovery.

1. The World about A.D. 300. 2 lessons. 1 map.
2. The Greek Empire, the  
Empire of Charlemagne,  
and the Arabian Empire.  
Mahomet. 3 lessons. 2 maps.
3. The World about A.D. 1000. 2 lessons. 1 map.  
Norse discoveries of America.
4. The Mongol Empire. Marco  
Polo. 2 lessons. 1 map.  
The Portuguese Discoveries. 4 lessons. 1 map.  
Columbus, the New World.
5. The World about A.D. 1600. 2 lessons. 1 map.
6. The World about A.D. 1700. 2 lessons. 1 map.  
The Dutch, English Colonies.
7. The World about A.D. 1800. 2 lessons. 1 map.
8. The World of To-day. 1 lesson. 1 map.

Total.—10 maps, 20 lessons.

SYLLABUS C.

EUROPEAN HISTORY COURSE.

Maps can vary in number ; the list below is the minimum.

1. The Roman Empire.
2. The Gothic Kingdoms.
3. Charlemagne's Empire and surrounding countries.
4. Europe about 1150 A.D.
5. Europe in the days of Charles V., 1550, showing his possessions.
6. Map to illustrate the Thirty Years' War, and the changes caused by it, 1648.
7. Europe after the Treaty of Utrecht, 1715.
8. Europe in 1812, showing Napoleonic victories.
9. Europe after the Great War, 1815.
10. Europe of to-day.

Total: Thirty lessons, ten maps.



## APPENDIX II.

## NOTE ON THE TEACHING OF SCIENCE.

BY MISS EDITH AITKEN.

Science Mistress in the North London Collegiate School, late scholar of Girton College.

The complete science courses may be divided into about five stages, as follows:—

Stage I.—Forms I., II., Lower III., III. Ages, 8-12. Time, two hours per week.

I consider that the main object of teaching science to children under twelve is training in observation and in manual dexterity, but that even at this age the idea of experiment as the means of investigation should be implanted. The time given to science is two hours a week, and this is divided between purely observational botany, and what, for the sake of shortness, we call "science." This work is done in a special "science room," which is fitted with gas and water, and simple benches, which do not interfere with a complete oversight of the room by a teacher, and which leave plenty of room for moving about. The work consists of investigation by observation and simple experiment of common substances. The material is given to the children, and they find out what they can about it, doing to it what they please, subject, of course, to supervision and advice. They find out whether it is soluble or not, they boil it, bake it, try the effect of acids, examine it with the microscope, try to form crystals, etc., and are then encouraged to find out at home anything they can about it and its uses. Beginning with such substances as sand, clay, lime and chalk, they find out, for instance, the use of mortar, the nature of earthenware, etc. From alum and gypsum they discover water of crystallisation, and so on. They are allowed to talk and move about the room, only being required to stand silent when a small gong is struck, this being the signal that the teacher has some general direction or advice to give. Later on, organic substances, such as sugar and soap, are examined. It need hardly be pointed out how such work helps in their geography lessons.

Stage II.—Form Upper III. Age, 12-13. Time, two hours per week:—

At this stage exact measurement is introduced. The measurement of straight and curved lines, areas, volumes, and weighings takes about two terms, with a simple explanation of moments and examination of a

balance to precede weighing. Relative densities and the principles of flotation follow on easily in the third term of the year.

It is more difficult to keep up active interest at this stage, for while in Stage I. the child's natural curiosity is constantly at work, the ideal of accuracy and neatness needed as a stimulus in Stage II. has to be formed gradually. The child desires to *know*, but does not know that certain habits and skill are necessary before it can really get to know. Squared paper and coloured chalks are useful. And, though a good deal of this work no doubt *might* be done in an ordinary class-room, it is much easier to keep up interest by the invention of fresh and varied exercise, if it is done in the specially arranged room described above, where freedom of movement is possible.

Stage III.—Forms Lower IV., IV., and Lower V. Age 13-14½. Time, two hours per week (at least).

This stage is occupied with elementary physics, the work being, of course, all practical, and carried out by the pupils themselves with occasional demonstrations of new operations, etc. The subjects dealt with are:—

The characteristics and relations of matter in the three states of solid, liquid, and gas. The pressure of the air, construction of the barometer and of weather charts.

The relation between heat and temperature; the construction and use of thermometers. Latent heat of water and steam. Specific heat and simple calorimetry.

Measurement of force. The spring balance

Resolution and composition of forces, parallel forces, moments, centre of gravity, etc.

Stage IV.—Forms V. and Upper V. Ages, 15-17. Time, two periods of 1½ hours per week. (At present it has only been found possible to arrange for hour lessons, but this is certainly too short.)

We now come to the study of *change* in matter, brought about by heat, etc. We follow very closely Dr. Armstrong's scheme (cf. British Association Report, 1889. I.A.H.M. and other syllabuses). In this series of logically connected problems the pupil is put in the position of an original discoverer, often repeating the original experiments, *e.g.*, those of Scheele on the rusting of iron and combustion. This problem course can be extended to cover most of the field of the London matriculation syllabus, and practically the second year is occupied in preparing definitely for that examination. I much regret that this examination still includes a certain amount which must be taught dogmatically, and also that it is not a practical examination.

Stage V.—Form VI. Age, 17-19. Time, eight hours per week or more.

At this stage the work should aim at becoming more accurately quantitative, so as to form a basis for chemical theory. Also a general review of the subject, including the chemistry of the leading metals,

should now be undertaken, the pupils being encouraged at this period to read the subject. Knowing how to carry on experiments, they are quite justified in reading up other people's results. I generally here set pupils to study special subjects historically, but it is a great pity that the requirement of qualitative analysis by most scholarship examinations necessitates taking time away from subjects much more important to a general understanding of the subject. We seldom have time to touch organic chemistry.

In every school there are groups of pupils who, either by reason of slow or imperfect mental development, or because of lack of early training, are not fitted for the severer, more exact, side of science. We consider it wiser to recognise this, and to treat them accordingly, as belonging mentally to an earlier stage than their actual age would imply. Throughout the school, therefore, the study of botany is carried on, to provide interest and a scientific training other than that which we consider our complete course, but more fitted to a certain type of pupil. They also learn physical geography and hygiene. Indeed, courses on hygiene are delivered to all pupils, and each is required to pass an examination in this subject at some period of her school course. But this is, perhaps, rather a piece of technical instruction than part of the actual science course.

Finally, in Stage 5, while we regard chemistry as, on the whole, the best in which to encourage specialisation, we allow alternatives, and girls who have a special taste for botany or biology are always allowed to specialise in these subsequently to the course of elementary physics and chemistry of Stages III. and IV. '

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## PHYSICAL EDUCATION AT THE SHEFFIELD HIGH SCHOOL FOR GIRLS.

(GIRLS' PUBLIC DAY SCHOOL COMPANY.)

The intention of this paper is to show how the admitted claims of physical education are met in a Day School for Girls, equipped with playground and gymnasium.

In our endeavour to meet these claims, and in our inexperience, the first difficulty that confronted us we termed "insufficient time." But this seeming obstacle should rather be looked upon as springing from the inexperience of teachers in correlating intellectual and physical education and, possibly, from their lack of courage in accepting the limitations which a due attention to physical claims imposes on our intellectual ideals.

When once the importance is recognized of starting intellectual training with a sound and healthy body, we find that what is needed is a re-adjustment of our ideas regarding essentials and non-essentials in a girl's education. For instance, in the case of a pupil whose chest is imperfectly developed, the delay in the starting of a second language for a whole year, to leave time for daily remedial treatment, is a very small matter compared with the increased vigour which such treatment brings to future work.

Entrance examinations, according to time honoured custom, are imposed on all new pupils, and their course of intellectual work is based on the standard of attainment thus revealed. But the accuracy of our estimate as to potentialities can only be truly ascertained when the condition of the physical powers has also been made clear to us by an expert. The necessity for a physical examination is thus forced upon us, for without it we cannot, in individual cases, measure the relative importance of treatment for intellectual and physical well-being.

In all public schools a health declaration of two kinds, from the parents, has been in use. A terminal statement is required to certify that the home has been free from infection, and a medical statement where homes have been infected. Since, however, attendance in playground and gymnasium has come to be regarded as an essential part of a girl's education, these certificates I felt to be quite inadequate, and information as to eyesight, heart, and spine, became a necessity. For many years, therefore, a medical statement regarding these points was asked for from all new pupils, as a guarantee of their ability to undertake the school work and to profit by a gymnastic course.

But even this guarantee has been found to be insufficient, and with the valuable co-operation of Miss Helen Wilson (M.D.,

Necessity of ascertaining the state of pupil's health. A physical test as much needed as intellectual one. Entrance Physical Examination.

London), the subjoined Form for the physical examination of new pupils has been drawn up. I add reports of special cases to illustrate the value of such a test.

No. ....		Date .....	
NAME .....		AGE .....	
HEIGHT .....		WEIGHT .....	
SIGHT.      Right.		Left.	
Glasses ?			
HEARING.    Right.		Left.	
Throat, &c.			
Breathing.			
Lungs.			
Heart.			
Chest Measure.		Waist Measure.	
Vital Capacity.		Do.    over Stays.	
Chest Formation.			
Spine.			
Muscles.			
Arch of Foot.			
Development.			
REMARKS.		ADVICE.	

[I should here like to emphasize the fact that in giving particulars of this medical examination I chiefly speak of the abnormal pupil. The normal pupils are treated by means of the "educational" gymnastics, or exercises for the development of the healthy body, now existing in all good schools, and the importance of which is generally understood.

As the treatment for the abnormal pupil is alike in no two individual cases, I dwell at some length on the subject of "medical gymnastics," or exercises for the restoration of health.]

A.B., aged fourteen, a new pupil, entered in the first term of the year, and wrote a good entrance examination paper. She would have been placed in an Upper Fourth form, but for the revelation in the Physical Record of incipient lateral curvature, demanding not only remedial exercises, but special private treatment. In consequence of this discovery she was not only placed one form lower, and the study of Latin, and of one branch of Mathematics delayed, but her Time-table was still further modified in order that remedial treatment and exercises should be undertaken when the body was unwearied. The Time-table of the Physical Mistress will show the special provisions made for similar cases. Private treatment having gone on for three months, it was ascertained that the tendency to curvature had been arrested. In the second term the Class Time-table was followed with a modification to allow of attendance at the Remedial Class. In the third term, special exercises were given for daily practice at home, and the gymnastic course of the form was followed. Needless to say, enjoyment of games and increased mental and physical vigour were the result.

State of health revealed sufficient detailed record.

(a) Exen tions or threemo

(b) Later modificat in Home Time-tal



## SHEFFIELD HIGH SCHOOL.

## PHYSICAL RECORD.

NAME, A. B.

No.

ENTERED SCHOOL, January, 1897. LEFT SCHOOL \_\_\_\_\_

		DATE.	DATE.	DATE.	DATE.
		January, 1897.	July, 1897.		
Age . . .	—	14	14½		
Height . . .	—	4 ft. 9½ in.	4 ft. 10½ in.		
Weight . . .	—	6 st. 4½ lbs.	6 st. 7½ lbs.		
Sight . . .	Right Left Colours Glasses	Very good. " " —	Normal. " —		
Hearing . . .	Right Left	Normal. "	Normal. "		
Throat, &c. Breathing	— —	Normal. "	Normal. "		
Lungs . . .	—	Normal.	Normal.		
Heart . . .	—	"	"		
Chest Measure	—	27½	28½		
Waist Measure	— (over Stays)	23	23½		
Chest Forma- tion . . .	—	Good.	Good.		
Spine . . .	—	Left curve (single) hollow back.	Can stand perfectly straight.		
Muscles . . .	—	Good.	Good and equal.		
Arch of Foot	—	Normal, slightly flat.	Still slightly flat.		
Development	—	Limbs short and broadly built.	Does not stand as straight as she can, is lazy. Walks badly.		
Remarks . . .	—	Rational corsets two inches too tight. Has never had backache.	—		
Advice . . .	—	If possible, special private gymnastics for three months. To see me in three months.	No more treatment at present; possibly next year.		

## SHEFFIELD HIGH SCHOOL.

## PHYSICAL RECORD.

NAME, D. D.

No. \_\_\_\_\_

ENTERED SCHOOL, September, 1896. LEFT SCHOOL \_\_\_\_\_

		DATE.	DATE.	DATE.	DATE.
		October 1, 1896.	Nov. 30, 1896.	Sept. 16, 1897.	
Age - - -	—	10	—	—	
Height - -	—	4 ft. 7½ in.	—	—	
Weight - -	—	4 st. 9 lbs.	—	—	
Sight - -	Right Left Colours Glasses	Normal. " —	— — —	— — —	
Hearing - -	Right Left	Normal. Deaf,—from wax.	— —	— —	
Throat, &c. -	—	Tonsils enormous.	Tonsils have been cut. R. still large.	—	
Breathing -	—	Nasal, fairly free.	—	—	
Lungs - -	—	Normal.	—	—	
Heart - -	—	"	—	—	
Chest Measure	—	22½	23	24	
Waist Measure	—	21	21	21½	
	(over Stays)				
Chest Formation - -	—	Flat, but good expansion.	—	—	
Spine - -	—	Well marked L. curve in lumbar region and lumbar kyphosis.	Kyphosis better, but L. curve still very well marked.	Much more symmetrical. R. hip still prominent; no kyphosis.	
Muscles - -	—	Limbs fair, trunk poor.	—	Very good.	
Arch of Foot -	—	Normal.	—	—	
Development -	—	Tall, growing rapidly.	—	—	
Remarks - -	—	R. hip 1 in. higher than L. No pain in back. Always stands on one leg.	—	—	
Advice - -	—	To go to her own Doctor for removal of tonsils. Special private daily gymnastics. To see me in 2 months.	Private daily gymnastics to be continued.	No further special treatment needed.	

As these two cases are chiefly spinal, Dr. Helen Wilson has kindly supplied me with notes giving other details, which I quote verbatim.

"1. The examination is nearly always made in the presence of the mother, with whom I afterwards have a short conversation. This plan has two advantages; it allows ocular demonstration of the short sight, of the threatened curve, or of the tight clothing, about which many parents are apt to be sceptical or indifferent; and it emphasizes the fact that the ultimate responsibility for the child's physical welfare rests with the home and not with the school.

"2. I am careful never to undertake the treatment of any defects I may discover (except in my own patients). I give the mother such hints as may seem necessary, and I advise the school authorities if there is anything they ought to do, but when medical treatment is required, I refer the case to the family doctor, or, occasionally, to a specialist.

"3. In the following notes on the different headings I shall quote some figures from an analysis of the last 146 examinations I have made. The ages mostly ranged from 10 to 18, the average being  $13\frac{1}{2}$ , but the series includes four children under 10, and six or eight student-teachers over 18 years of age.

ght. "Defective sight in one or both eyes was found in forty-one cases; of these eight were already wearing suitable spectacles. Twenty, including several who suffered much from headache, &c., were advised to consult an oculist. In the remainder the degree of the defect was so slight that treatment was considered unnecessary, but in all cases a note was made requesting that the seat in class might be specially considered—near the board for short sight, &c.

earing. "Hearing was more or less defective in twenty-seven cases. Not infrequently, especially if one ear only was affected, the fact had been previously unsuspected, thereby laying the child open to blame for inattention or stupidity. In a few instances, the cause appeared to be merely temporary cold. Four cases, in which treatment seemed likely to be beneficial, were recommended to seek medical advice. Where both ears are affected, a seat near the teacher is requested; where only one ear (say the right) is deaf, the child has to be seated to the teacher's left, thereby securing better attention, and preventing undue twisting of the body.

front and  
eathing. "Of these 146 girls, twenty-eight habitually breathed through the mouth. Where this appears to be merely a habit, the desirability of curing it is impressed on the pupil and the mother. But in many it is due to obstruction of the nasal passages by enlarged tonsils or adenoid growths,—a condition which leads to deafness, and is frequently associated with liability to catarrh, deficient expansion of the chest, and retardation of development. With older girls, little can be done except by respiratory gymnastics, but six of the younger girls were advised to have surgical treatment. On most of these the



"necessary operation has been performed, with benefit to the intellectual development as well as to the general health.

"In the few cases where any disease of the lungs has been detected, it was already known and under treatment. Lungs.

"Structural disease or disordered action of the heart was found in seven cases. In three of these gymnastics were restricted, and in three altogether forbidden, either temporarily or permanently. Heart.

"These measurements are useful for comparison with height and weight, and as an index of muscular and thoracic development. Chest and Waist.

"Flat chest and round shoulders are associated with deficient expansion and low vitality, and there is often in the same cases a tendency to lateral curvature. As a rule I find the clothing too tight across the chest, though loose enough in the back. Chest Formation.

"Twenty-one are noted as flat-chested, or stooping badly.

"In thirty-three, a tendency to lateral curvature was noted; in some of these it was very slight indeed, in others merely threatening to become serious, but in ten very well marked. Spine.

"In this connection the muscles of the trunk and back are specially noticed. Muscles.

"Flat foot occurred in thirty-two cases, but only three or four of these called for treatment. In others it was of importance as indicating that want of tone in the muscles generally which is one of the chief predisposing causes of curvature. Flat Foot

"It is in remedying defects of the classes last noted that the co-operation of the School authorities is most needed.

"Where the general muscular development is poor, 'extra games' or 'extra gymnastics' are advised.

"Cases of flat chest and shallow breathing, or those where bad habits of sitting or standing are causing a 'postural curvature,' are put into a small 'remedial gymnastic class,' where they have carefully graduated daily work. In certain cases the gymnastic mistress is asked to give individual teaching for ten to fifteen minutes daily for a few weeks, re-educating the muscular sense, or teaching the proper way to breathe, so as to enable the pupil to derive full benefit from the class-work. In five cases the curvature has been found so severe as to require special treatment. In most of these the parents have made a private arrangement with the gymnastic mistress, who has treated them by the Swedish movements at her own house, under medical supervision.

"To be satisfactory the examination must be thorough. While the child is dressing I take the opportunity to ascertain if the clothing is sufficiently roomy. Cases of actual tight-lacing, or compression of the waist are rare, though they do occur even in girls of 12 or 13 years. But in nearly half the cases, either the dress or the underclothing fits so closely that it does not allow of that free movement and expansion of the chest, without which gymnastics and games lose much of their value. I think this is invariably the case where flat chest or weak back occurs, and I do not allow Remedial gymnastics to be begun till the clothing has been let out.

"In some cases, especially of heart defect or of threatened curvature, I make a note that the girl should see me or her own doctor in three months or six months, as the case may be.

"I hope that soon all cases may be re-examined after an interval of two or three years. Already a few parents have expressed a wish for this. The condition of a girl at eleven may be very different from what would be found on examining the same girl at fourteen.

"Meanwhile, the gymnastic mistress keeps a yearly record of height and weight. She also tests the sight at intervals."

ysical  
stress.

For such individual cases we not only need the whole time and trained skill of a Physical Specialist, but also the sympathy and co-operation of the form mistress. Although stated hours are set apart for individual treatment, no fixed arrangement can meet all cases, and without the sympathetic support of the form mistress difficulties are sure to arise. There is, however, little difficulty in securing this interest on the part of teachers, for the increased power and vitality of pupils thus treated speak for themselves.

"A thorough and scientific training for the Physical Mistress is a first essential, and the high ideals of physical culture inspired by Ling, and the valuable training in the Stockholm Institute (possessed by two successive Mistresses) have done much to secure my present organization. The importance of appointing a Physical Mistress whose whole time can be devoted to the work of a large Day School will be readily admitted if her duties be stated."

ties of  
ysical  
specialist at  
beginning  
term.

In describing the work of a Specialist mistress in Physical Education, we will assume that she has, at the beginning of the term, to deal with the health records of thirty new pupils. These being entered in a permanent register, each girl is privately interviewed in the Head Mistress's Room, and such details as are thought necessary are explained, and definite instructions given as to posture in writing, sitting, standing, &c. In this way, the importance of all health questions is emphasized, and the co-operation of the pupil is gained in securing a healthy and vigorous development, the success of which so largely depends on herself.

The form mistress, with the help of the Physical mistress and the Health Record, assigns to her pupils desks suited to their special needs as regards height, &c. For instance, a girl with defective eyesight has a special position to right or left of the Blackboard, as may be required.

nual  
testing.

In the first week of the Autumn term, when promotions have taken place, all pupils are weighed and measured, and their eyesight is re-tested. Defects are communicated to the parents and to the form mistress, who regulates the work accordingly. In this way parents and teachers can co-operate in giving to the pupil's health all needful attention.

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For instance, in cases of undersize, work after morning hours has been wholly excused in order that a greater amount of out-of-door exercise may be secured.

In the case of weak eyesight, German has been discontinued, and the time thus gained in the morning used for private preparation, thus lessening the amount of work to be done by artificial light.

In addition to these extra duties at the beginning of the term, the Physical mistress's daily Time-table is as follows:—She begins her morning by regulating and registering the temperature of Gymnasium corridors and Hall, in the latter of which many divisions of the School are drilled.

Cases requiring individual treatment are dealt with from ten to thirty minutes according to requirements, in a room provided for the purpose and fitted with special couch, screen, &c.

Remedial class treatment for the half hour preceding the morning recreation of the whole School, when (after rest) milk, cocoa, or soup, &c., can be taken. Remedial cases are usually treated in classes of six. Ten should be the maximum. At present this daily class numbers nine.

Drilling of the whole School—in smaller numbers for younger and uninstructed classes, and in larger numbers in the well-practised classes of the Upper School. The exercises are Swedish, and are given with the precision, accuracy, and systematic arrangement of the Swedish system—the prompt obedience to the word of command being good alike for mind and body. It is interesting to note the difference in width of chest, position of the head and shoulders, and in general alertness between the beginners and those who have been in the School some time.

At intervals between nine and eleven a.m. inspectional visits to Class Rooms are systematically paid by the Physical Mistress, who notes posture not only of weak, but also of normal cases.

Gymnastic class—each form being taken once a week. Classification is arranged for the most athletic, and for beginners.

[Girls who require special attention, however, attend twice or thrice a week. Thirty-one are now attending twice, and two thrice. Pupils living at long distances from the School are placed in early divisions, and thus a rest is secured before the walk home. Exemption from gymnastics is only granted on medical authority.]

On the report of intellectual progress sent to each parent at the end of term, the Physical mistress enters her opinion of the physical development of each pupil, thus directing the attention of the parents to points needing special care and attention. In this way the subject finds its natural place, completing, as it does, the report on general progress, from which, in my opinion, health records ought not to be excluded—a detailed *separate* Health Report being undesirable, as tending to foster self-consciousness on the part of the pupil.

Hygiene a  
class-subject  
in curriculum  
of Fourth  
forms.

Pupils in the Fourth form, where the average age is about fourteen, take a course in Hygiene, including:—

1. Respiration and Ventilation
2. The Skin—Cleanliness.
3. Digestion—Food.
4. Exercise
5. Clothing in relation to Health.

Thus, all girls who go through the School have the advantage of this course. In addition to these special lessons, the object of movements in drilling and gymnastics is explained.

Games.

So far I have dealt with the physical education of girls in school only. As the question of games includes a voluntary element, it naturally falls into a separate division of the subject.

The playground is open to all girls from 8 a.m. to 8 p.m. (for half the year), including Saturdays and holidays, and we find that they fully appreciate and take advantage of it. There are tennis courts, a fives court, swings, &c. Stored in the playhouse are shuttlecocks, hoops, and skipping-ropes, for the use of the younger children, and a portion of the playground is set aside for them.

In addition to provision for special games, as there is an acre and a quarter of ground, three quarters of it is devoted to grass lawn for free play, sports, &c., and to garden beds. Each form has a piece of ground allotted to its special care and takes turns in mowing the grass.

The games are regulated by a Committee of girls drawn from Student Teachers, Sixth, and Upper Fifth forms; but on the teaching staff at least half-a-dozen members are interested, and some are excellent players at hockey, tennis, cricket, and fives. Their influence largely regulates the numbers in each form attending the playground. Until games are made compulsory in Girls' Schools, the attendance will be dependent not only on those mistresses who take part in the games, but on the interest of all Form mistresses in and the importance they attach to out-of-door exercise.

The Games Committee appoint two of their number to be together in charge of the playground each afternoon for at least an hour at a time, from 2 to 5 from February to November, and from 2 to 4.15 from November to February. They are responsible for the proper clothing and equipment of girls, the general order, the regulation of games, the care of all School property, and the moral tone of the playground.

Hockey-field.

In addition to the playground, a field is rented, within ten minutes' walk of School, in which hockey can be played any afternoon of the week.

Cricket.

During the Summer, Cricket Elevens are formed in the Middle School. The game rouses much enthusiasm and interest when matches are played between the Forms.

Tennis  
tournament.

During the Summer term a Tennis Tournament is arranged between public schools in the West Riding, a shield being competed for each year. The interest in this game is much increased by competition between the forms and between past and present girls.



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Lower School Sports and a Drilling Competition in the Sports Middle School take place annually, and increasing interest is taken in these by the School and its friends.

A Swimming Club is formed in the Summer Term, and a Swimming number of girls annually learn to swim. The best swimmer's name is inscribed on a beautiful shield presented to the School by a gentleman interested in the physical education of girls.

Walks on the surrounding moors are, from time to time, arranged by the Field Club; and all its expeditions, as well as other details connected with the above games, are reported twice a year in the School magazine.

Each term an increasing number of girls cycle to school, and so secure some exercise.

Notwithstanding these provisions for exercise, which certainly touch a great number, there are always some girls of sluggish and lethargic temperament who would evade them were it not that on the notice board of each class-room is kept a record of out-of-door exercise. Each girl, on her arrival at school, enters the amount taken on the previous day.

Two hours' daily out-of-door exercise is considered necessary, a weekly total of twenty-one hours being desired. This is reached by many from February to November, the main difficulty lying between November and February; but as this short period includes a month of holiday, special arrangements may be made.

If a form mistress notes that any girl's record falls short, enquiry is made and steps are taken to insure an increased amount of exercise, as, for instance, the dropping of attendance at an afternoon sewing class.

In planning the time-tables, this necessity for exercise is kept in view.

It is always impressed upon the girls, by word and notice, that fresh air and exercise should take the first place, sleep the second, and work the third. Subjoined is a copy of the register of half a term, and a smaller one for the pupil's note-book.

On the notice board in each class-room is a card calling attention to Dr. Dukes' time-table of sleep, showing the amount required at different ages during school life.

Under the age of 10 - 11 hours of sleep.

" " 13 - 10½ " " "

" " 15 - 10

" " 17 - 9½ " "

Record of Out-of-Door Exercise.

Notice boards of use for physical as well as intellectual interests.

I may, perhaps, be permitted to quote from a report, drawn up in May, 1896, by Miss Spence-Watson, Inspector of Physical Exercise for the Girls' Public Day School Company:—

"The most noticeable point in the physical work done in the School, is the care given to each pupil individually. As with the mental so with the physical work, it is adjusted to the ability of the pupils, and strives to develop every part and to remedy defects.

"Health is considered of the first and greatest importance, and the outcome is physical vigour throughout the School."



ertainty of  
physical con-  
ditions tends  
to eliminate  
uncertainty  
of intellectual  
demands.

Although I have, so far, dwelt only on the value of physical training as it affects increase of bodily power, yet it will be perceived by all educators that the moral effects are of greater import than any increase of measurement or of muscular vigour. Perhaps the greatest difficulty in dealing with pupils in classes is the fixing of an average standard of attainment. We all know that schemes of work may be planned in theory for children of different ages; but we know, equally well, how great are the variations in mental capacity, bodily strength, and life-circumstances. Hence the immense help in the apportioning of intellectual work, of an intimate knowledge of the physical health of our pupils. How important is it that we should know that our daily demands are well within the powers of, say, a rapidly growing child (whose health may be a cause for anxiety)—and, on the other hand, how equally important is it that, with the certificate of normal health to guide us, mental indolence should not be condoned.

This minimising of uncertainty is, perhaps, the teacher's greatest reward for the trouble involved in the keeping of the Physical Record. But not only to the educator is the making of just demands of the greatest moment; in the minds of the pupils, and especially of those below the average standard of health, is aroused a keen feeling of gratitude for the justice with which claims upon their powers are modified. For such, temporary relief can easily be secured in schools where re-classification prevails in certain subjects—a system carried out in all Schools of the G.P.D.S.C.—in which the Staff is large enough to allow of simultaneous treatment.

In the case of unsatisfactory pupils, whose work falls below the expected standard, the belief that the real cause of the evil may lie in the physical condition, keeps alive in both teacher and pupil, what Bishop Westcott calls "the transfiguring virtue of Hope" and often rouses in the pupil's mind an eagerness to co-operate in efforts so likely to bring their own reward.

E. WOODHOUSE,

Head Mistress of the

Sheffield High School.

November 1897.

[Since this paper was written, Mrs. Woodhouse has become Head Mistress of the High School for Girls, Clapham Common, London, S.W.]

## GAMES AND ATHLETICS IN SECONDARY SCHOOLS FOR GIRLS.

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The present age has become increasingly alive to the necessity of physical training for girls as well as boys, so that the giving of the due place to exercise in the curriculum of a girls' school is everywhere accepted as a principle. The differences of opinion which still exist are chiefly as to the kind and amount of exercise which should be taken. Even on these points there is much greater unanimity now than formerly. Twelve years ago when we started our school and insisted on a minimum of two hours exercise for the winter and three for the summer, and for as much variety as possible, adopting such outdoor games as cricket and hockey, we stood almost alone. We had to explain our position to hostile critics, and to encounter much opposition from the parents of our girls, and we felt that we were carrying on a crusade. But a wave of change has passed over the public opinion of the country, and there are now very few girls' schools of any pretensions which do not make some effort in the same direction. Even in the last two years the advance has been very great.

In short, the close connection of a strong, vigorous, well-balanced body with a strong, vigorous, and well-balanced mind is recognised, and the ideal of mental and physical feebleness and helplessness as an attribute of the really admirable woman has disappeared. Hence physical training for girls is receiving far more attention everywhere now than formerly.

Of the various forms of physical exercise possible to girls, some are better adapted than others to school life.

I propose to give some account of the various forms of exercise which I have tried in my own school, and the effects I have been able to observe.

(a) *Walking*.—A short walk is a useful supplement or alternative to more vigorous forms of exercise, and if the party is not too large, the formal two and two "crocodile" can be dispensed with, and longer walks on half-holidays are a very great source of pleasure and interest. Girls of 14—18 walk 7 to 10 miles with little difficulty even when not in regular training.

(b) *Running*.—Considerable care has to be exercised in running practices, as running is a great strain on all the organs. The chief points to secure are regularity of practice and graduation of the amount done, and then a good result may be achieved with safety. Our Upper Division of the drilling class (about 40 girls) who have been some time at the school can keep up at the double march for eight minutes. This is running in time and indoors. The out of door running practices are held in winter. The distance from the school to the playground, round the playground, and back again to the school, is a little more than a mile. The girls do this distance on winter mornings before work, partly walking, partly running, increasing



the proportion of the distance run gradually from time to time as they find they can. The record run for this distance timed with a stop watch is 9 minutes 17·8 seconds. Three others were under 10 minutes, and about seventeen between 10 and 12 minutes.

*Riding.*—This form of exercise must always be for the few, as the expense connected with it is great. There is very little difficulty about its proper organisation and management, and it is admirable for those who can take it up.

*Bicycling.*—I have hitherto found it impracticable as a form of school exercise, for reasons which will be given below.

*Swimming.*—This should be taught to all girls. Schools at the seaside have of course special facilities, but there are good baths in almost every town, and a private swimming bath would be a valuable addition to any school. The chief difficulty is that long immersion in water has a lowering effect on the body temperature, and may with certain individuals produce injury to health. Great care and judgment must be exercised in controlling the bathing.

Nearly all the girls in this school can swim, and they are placed in several grades, viz.: those who swim (breast stroke or side stroke only) ten strokes, for five minutes, quarter of an hour, half an hour. To get the school colours in addition to the half-hour qualification the swimmer must be able to show the various strokes in good style, dive, swim supporting another person for one minute, swim in her clothes (*i.e.* skirt, jacket, shoes and stockings worn over a bathing dress), and take them off while treading water out of her depth. This summer thirteen girls had colours, and twelve others who failed in some qualification had done the half-hour test, and eleven the quarter-hour test.

The greatest step is always found to be between ten strokes and five minutes. It may take a girl a whole season to get from the lowest grade to the next. From five minutes to a quarter of an hour is also a great step. But there is very little difference between the quarter of an hour and the half hour. Very frequently a girl able to do one test one day can do the further test the next. This fact, coupled with the knowledge of the possible risks of long immersion, have decided us to reduce the highest test to a quarter of an hour. Anyone capable of swimming continuously breast stroke for that time would be able to do much more on an emergency. The record swims of the school were made in the summer of 1896, when two girls of exceptional physical vigour and good circulation swam the distance between the Old Chain Pier and the West Pier (1 m. 50 yds.) in 40 and 42 mins. respectively. Several others might very possibly have succeeded also if I had been willing to allow of their trying so long an immersion.

In all swimming out of their depth it is imperative to have a boat following the swimmers, and the girls must be trained to keep together and close to the boat. We have only once had a case of cramp in the water overtaking one of the swimmers, and on that occasion this precaution prevented any accident.





PHYSICAL EXERCISES IN GIRLS' SECONDARY SCHOOLS.—(1) FENCING AT ROEDEAN SCHOOL, BRIGHTON.

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PHYSICAL EXERCISES IN GIRLS' SECONDARY SCHOOLS.—(2) FENCING AT BOEDEAN SCHOOL, FRICHTON.

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*Drilling and Gymnastics.*—There is a gymnasium attached to this school, and the whole school is drilled for an hour once a week. There are two divisions; the Upper Division consists of forty-four picked girls who have had long training, the Lower Division contains between fifty and sixty less trained girls and beginners.

Each class is divided into "sections" under a "captain" and "lieutenant," these "officers" being responsible for the daily practice of their sections, and as the "sections" are pitted against each other, this system automatically insures regular daily practice, the spare intervals of five and ten minutes in the day are eagerly taken advantage of for this purpose. The Upper Division drill with great precision and smartness. Gymnastics again have to be carefully watched. The risk there is that the novice may attempt exercises for which she is unfit, but by careful graduation of the exercises and regular practice very satisfactory results can be obtained, and a very great increase in muscular power produced. Some years ago when the class was first started not one girl in the school could show her head above the horizontal bar from the hanging position. Now quite half the Upper Division and a good many from the Lower Division can do this. Nearly every girl in both divisions can go hand over hand up 16 ft. of rope (the highest our present gymnasium permits of), vault over the horse and cross the bridge ladder, while a good many of the stronger ones are able to do much more.

*Fencing* is taken up by about twenty-four girls in the school. It is excellent exercise for strengthening the back and giving grace, agility, and quickness. The girls fence with light blunt foils, padded jackets, and wire masks.

*Dancing lessons* have much the same function to perform as drilling lessons, and as they more directly aim at grace of movement, are a very useful supplement. Usually half the school attends the dancing class in the winter.

The fortnightly evening dances are also very much enjoyed.

None of the above mentioned achievements, not even the swimming of a mile, are worthy of note as extraordinary athletic feats. They are, however, encouraging results as demonstrating what a little well regulated training will do for girls who are in no way exceptional—many indeed being sent to the seaside because they are physically under the average—and by what slight means we may raise the physical standard of the girls and women of the future.

But in giving some account of these means of physical training I have hitherto omitted that which is the staple form of exercise in the school. I mean the school games.

These are, after all, for purposes of exercise, more satisfactory than any other. They have an all important advantage over drilling and dancing in that they are carried on out of doors—secondly, in that the movements are voluntary and not to command—over swimming because they are possible at all times of the year—over riding because they are inexpensive. They are at once more vigorous exercise, and less monotonous than



walking, and therefore considered purely from the point of view of affording physical training and exercise, they fill a place in school life which nothing else fills so well.

But they have another and more important function to fill in the training of the character, and under this aspect their importance in school life is second to no other agency we can devise for the children's benefit.

Educationists acquainted with Fröbel's work know that in his Kindergarten, or place of education for children of pre-school age, he advises that the time should be partly spent in games and partly in "occupations," and draws a broad distinction between the two. Both are usually classed as play by undiscerning elders, but there is a fundamental difference, which was pointed out very forcibly by Dr. Köhler, of Gotha, one of Fröbel's best known disciples. He shews that an "occupation," *e.g.*, paper-plaiting, clay-modelling, or building with bricks, &c., is a form of activity directed towards an end, and in which a large part of the pleasure lies in the result achieved, that to the little child at any rate, the producing of any result means effort, very often sustained and painful effort, also that each child can pursue an "occupation" alone, and impress his or her own individuality on the result. In fact, this form of "play" has all the elements of what we are accustomed to call work, when undertaken by older people, and if, as in the Kindergarten, you add the element of compulsion and do not allow the child's waywardness to interfere with the completion of an "occupation" once undertaken, the parallel is still more close.

A "game," however, is different. There the pleasure lies wholly in the activity itself, the actions which make up a game produce no tangible after result, they have no aim beyond themselves. And it is social. Two is the smallest number which can play a game, if we refuse to dignify such trifling as patience and solitaire by the name.

A game, then, may be defined as a set of actions performed according to prescribed rules, the pleasure of which lies in the observance of the rules. Hence it is obvious that all the players must know and obey the rules of a game if it is to be played at all. It pre-supposes in the players a certain stage of development, some intelligence and the capacity to obey a law rather than a person.

Therefore very young children left to themselves cannot play regular games. They may act impromptu plays, copying grown up life, they may romp together, and they may invent wonderful "occupations," often destructive ones, but they do not play set "games" without the guidance and help of some older person whose authority is sufficient to secure the observance of the rules of the game. With that help they often enter very keenly into the spirit of the game, but to start and enjoy a real game by themselves implies a later stage and some training and experience.

Among older children or adults unaccustomed to playing, the first start will present many difficulties; quarrels—the desire to



have the rules relaxed for the benefit of an individual—will intervene to spoil the game, and it will take time and patience and usually the presence of some over-ruling authority to call out the right spirit. Once, however, this is done and there are a majority of trained players, public opinion among them takes the place of superior personal authority, and it is then that the influence of the games tells most strongly and beneficially.

All games, whatsoever their nature, require observance of their rules if they are to be played at all. Hence any game will give this much training to its players—a training in obedience to law, and in acting together for a common end. But it is a matter of familiar experience that not all games are equally valuable, and we should rigorously exclude games with vulgar and vicious associations from those we introduce to the young. Fortunately, in the national out-of-door games we have the very type of what is most desirable. They combine with the primary training in obedience common to all games, the finest opportunity for healthy pleasurable exercise, for training in physical skill, in courage and endurance. In those games, such as cricket, which involve large numbers, the constant necessity for the subordination of self to the good of the side, for perfect fair dealing with other players, for patience and cheerfulness under reverse, for exertion in despite of inertia, for resource in emergency, there is the finest field for the exercise of all the civic virtues. When once the spirit of enthusiasm for games has been called out in any school or among any set of young people, it requires rather an abnormal amount of selfishness on the part of an individual to induce him to allow his particular wants and wishes to interfere with the course of the game. However much such an one may grumble and quarrel afterwards, during the game self-control is usually maintained, because regard for the good opinion of his fellows will not allow him to do what is "unsportsmanlike." Hence, for the time the game is in progress the players are undergoing a very complete discipline for the character, all the more effectual because they are themselves unconscious of it.

I am aware that much of what I have just said is mere truism. Every master of any boys' school in England knows it and has known it these many generations. And so the playground has for a long time been an essential adjunct to every boys' school worth the name in the country. Wellington's famous "mot" attests their value, and their hold on our national life is unquestioned and enduring. Indeed the games may have had their share in moulding our national character, to make us able to evolve and to preserve free institutions, to make us law abiding and moderate even in our revolutions.

The reason for insisting so strongly on the moral influence of games is, that in that lies their great value for girls also. Considered merely as exercise and recreation other agencies might replace them, but considered as a means of training the character they stand alone, and they provide precisely that element in girls' education which has hitherto been lacking.

Writers of note have often attributed small-mindedness, narrowness, and the kindred vices, *e.g.* spite, meanness, ungenerous judgments, intolerance, and incapacity to omit the personal element from the consideration of a public question, to women, as women. Such generalisations are usually at best half truths, as women are human beings first and females afterwards, and there is hardly any generalisation you can make of the qualities attaching to either sex which is universally applicable; thus any such statements must be accepted with large reservation. Still it is probably true that the vices bred by a restricted life and narrow circumstances, are more often to be met with among women than among men, and if so, then the girls need even more than the boys some means of training which will teach them to look outside themselves and to work for the common good.

That games do provide precisely this discipline, I have been able to test during a period of twelve years. I can certainly say they help to create a broader point of view in the school, and to promote friendliness, mutual appreciation and forbearance, and to lessen the spirit which imports personal motives into every action.

The indirect effects on the life of the school are many and most useful.

In co-operating in managing the playground, the girls learn the value of organisation and of rules made for the general benefit in other departments, and are therefore brought into closer sympathy with their teachers.

Secondly, they form a constant topic of healthy impersonal conversation, and all who have to deal with the young congregated together in large masses, and who know the mischief which may be done by gossip and by unhealthy and impure talk will appreciate the value of a strong common interest in the school, which keeps the children's minds in a healthy direction, and thus raises and sweetens the whole tone of the school.

Thirdly, they may be a help to the stupid and backward children who yet have character, and who, if they can hold their own in the playground, do not lose heart and self-respect.

And lastly, the amount of real happiness which may be added to school life is not to be overlooked. Happiness is almost the right of youth; under its invigorating influence the duties of life are much better done, and anything which may legitimately increase it, should surely not be neglected.

But it cannot be too strongly insisted upon that if such benefits are to be derived from games in the school, their due importance must be fully realised by its head. No other form of physical exercise, however good, must be allowed to compete with the games to their detriment. It is for this reason, mainly, that I do not see my way to including the bicycle among the forms of exercise which can advantageously be practised at school. They must be fostered and encouraged and adequately provided for, side by side with the work. Doubtless this is much easier to do in boarding schools than in day schools, for in the latter the time of



the pupils, not spent in instruction, is not entirely under the control of the mistress; and as the walk to and from school has always to be taken into consideration, afternoon school must close at such a time as not to put the home walk at too late an hour. Even in boys' day schools these difficulties have to be faced, and it is certainly rare to find the playground and the games quite as well organised in boys' day schools as in boarding schools. If we, therefore, wish to see what can really be done for girls in this direction, we must look to the boarding schools to set the standard, and to the day schools to accomplish what they can.

It is always more useful and instructive to deal with particular instances than with generalities, and I therefore propose to give some account of the way the games are organised in our school (of nearly 100 girls), to show, at any rate, that I am not advocating anything that is not feasible.

In the first place, we have secured the use of a playground close at hand of 9-10 acres. It contains three hockey grounds, three cricket pitches, a levelled place for practising nets, and four lawn tennis courts (if it were level a smaller ground would afford the same accommodation). Thus both in summer and winter the ground is large enough to accommodate the whole school at the same time. This fact is important, as, if this were not the case, the divisions of the playground would necessarily correspond to the divisions in the school, and the best players might not be able to play together; much unity of feeling and *esprit de corps* would be lost. It is here at the outset that many girls' schools fail as yet to procure the first requisite for games—and on this point, public opinion, particularly among parents, should be more awake, as that and that only will effect any lasting reform in this direction.

The time taken by a game of hockey is one hour and ten minutes. It is such hard exercise that usually this is enough for the whole day in the winter months. We choose the most favourable time of day—viz.: 2.20-3.30 p.m., which gives three quarters of an hour after the mid-day meal, and half-an-hour before beginning work again, and is the picked part of the day for being in the open air in winter. As a rule this is supplemented by "training," or a short walk in the morning between breakfast and work. The girls wear a special dress for playing—viz.: a sailor blouse and a blue serge skirt worn over knickerbockers, and made sufficiently short and full not to impede running. As our ground does not at present adjoin the school,\* the costume has to be one which does not excite attention by any eccentricity, and we have been glad to find that it is possible to obtain something extremely serviceable within these limitations.

For gymnastics the girls wear the same costume with a shorter skirt, worn only to the knees. Most schools or clubs

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\* I have described the existing arrangements, but next year when we move to the new buildings of Roedean School, we shall have a better ground immediately surrounding the school buildings.



which play regularly have come to recognise the necessity for a special dress, and its importance lies not only in the advantage to be reaped during the game, but as ensuring a change of clothes immediately afterwards. This precaution, especially if supplemented by a hot bath, is very effectual in preventing the girls from taking cold if they should have become overheated whilst playing.

The games are organized by means of a Games' Committee, consisting of several elder girls, including representatives from each house, the captain and vice-captain of the first eleven, and one of the mistresses. This Committee settles such questions as, which set shall play on which ground, and which girls shall belong to each set; arranges for the teaching of beginners, chooses the first eleven, and awards "Colours" to those who acquit themselves with distinction. This arrangement has worked well for many years. The authority of the Committee has never been questioned, and great confidence is felt as a rule in the equity of its decisions. Another function of the Committee is to see that all girls in the school who are not prohibited by medical advice from taking part in the games, should do so. It is a great object to be kept in view to make the games obligatory on all, as otherwise those very individuals whose characters most need the discipline they afford, will evade them. This compulsion should, however, best not ostensibly come from the head-mistress, as the pressure put upon individuals by the public opinion of the girls is much less irksome, and far more effectual. Also, as girls are not at all times equally fit for violent physical exercise, the moral obligation of a school rule is better avoided. There is a walk arranged for at the same time as the games, and those who do not go to the field are expected to take the walk. Walking, unless it is for some object, is never popular with young people, and many who dislike games, dislike the walk more and choose the lesser evil.

The emulation caused by moving players from one set to another, according to proficiency, and in and out of the school elevens (there are five elevens) is a great incentive to regular play. Still girls cannot play one game day after day for nearly six months, however pleasurable it may be, and however good the exercise, without finding it to some extent monotonous, unless some outside incentive is brought in to vary it. The matches with other schools and clubs supply this element, as well as the matches between the different houses of which the school is composed. Here it is, however, that all the objections which may be urged against games are most felt by those elders who have not considered the question in all its bearings. In a match, every player strives to do her utmost, and hence here the temptation to over-exertion is strongest. The hours of different schools very often are not the same, and hence some interference with work may be necessary on one side or the other: then the school or club played may be at some distance, and if the match takes place on the school ground on the first occasion, it is reasonable to ask the school to play on their antagonists' ground

on the next, so that short journeys are often unavoidable, which involve expense and again perhaps some interference with work. But the exercise of a little common sense may easily override these objections. It will be necessary to ascertain that each intending player is physically in good condition before allowing her to play in a match, and if those matches for which the players have to leave the premises, or to neglect their work, are limited to two or at most three in a term, no great harm is done.

The gain in interest in the games is considerable; the prestige of the first eleven is greatly enhanced by the privilege of occasional short excursions from the school, and the expense is not forced on those who would object to it. Sometimes such excursions can be made indirectly the means of general culture. Our first eleven has for some years past been invited during the hockey season alternately to Cambridge and Oxford, to play the Ladies' Colleges there. The team has spent Saturday to Monday under the hospitable roof of kind friends in both towns, and has in the time not used in playing made acquaintance with some of the interesting features of either University.

The matches of the first eleven do not alone ensure its prestige, and induce the rank and file to try and merit so distinguished a position, but they are a great stimulus to the *esprit de corps* of the school, and to the interest felt by the whole school in the games: the feeblest players value the successes of their seniors and manifest great enthusiasm over them.

For the rank and file, however, the Committee arrange a tournament, sometimes between teams picked for the purpose, sometimes between the different forms of the school; and in this way it is difficult for any individual to escape taking part in the games.

I have dwelt at such length on the various means for inducing girls to play because the uninitiated are apt to suppose that girls would play of themselves. It takes unremitting patience and perseverance to create and preserve this tone, and to prevent any flagging and falling off. Some individuals will always be enthusiastic, but the tone in the rank and file must depend on that of the majority of the elder girls, these must be made to think them important and interesting; certainly they will not do so unless the head thinks so herself.

If a head-mistress can and will play herself so much the better, but if she cannot, then she must take other means to impress the girls with her sympathy with the games and with her sense of their importance.

But in the long run neither this sympathy, nor the matches, nor any other expedient will act so effectually as the actual sharing in the games by some of the mistresses. If the girls can realize that what they enjoy their mistresses enjoy too, that is a very great gain. There has been some correspondence recently on the subject in the pages of the "Journal of Education" under the heading of "Compulsory Games for High School Mistresses" in which one writer especially expatiates on the hardships



experienced by older mistresses being obliged to take playground duty when they were tired with work and not physically fit. It seems to me that a head-mistress who would exact such unwilling play from a valuable teacher, who may be very hard worked in other directions, must be thoroughly lacking in common sense, or must through financial exigencies be much understaffed. I have always had on the staff several older, very valuable and experienced teachers, who feel that after a morning's hard work their recreation lies in absence from the girls' society, and in freedom from responsibility, and who have arrived at an age when violent exercise is a tax on the physique rather than a relaxation. These mistresses have never been asked to play games or to go to the playground, except now and then to watch some event of special interest. But any school makes a mistake which does not have on its staff some mistresses young enough to be companions to the girls and to sympathise with their view of life, and such enjoy the games for their own sake and prefer taking their recreation in that form. I have always been fortunate in having this element well represented. Some schools engage a special games' mistress, and it is certainly a good thing to have one mistress who takes the chief responsibility of the playground. I, however, rather deprecate calling her a games' mistress, and giving her no other duties. It certainly takes off from the spontaneity of the games to have their organization so obviously and formally recognized, and it seems to me to present one or two other difficulties. First, that the mistress who only manages games loses all touch with the work of the school, and only sees one side of her pupils' lives. Secondly, either the mistress will be very popular, and then the games may be unduly emphasized in the school, or she may be unpopular or merely indifferent to the girls. In that case she may find it difficult to preserve her hold over the playground. She may be despised as an inferior person by the more intellectual girls and the hard workers, and the prestige of the games will suffer. It is perfectly true that women of this generation, of over 25 years, who have not benefited by a good physical training in early youth, find it difficult to do hard mental and hard physical work at the same time, especially when the latter entails the strain of responsibility. Consequently, whoever undertakes the games must be more lightly worked than the other mistresses. In our school the president of the Games' Committee has for some years been my sister, Miss Christabel Lawrence. She has the care of one of the houses, and takes classes in various subjects, but she does not give more than two lessons a day. Her chief work is in the playground and in connection with the athletics in the school, but she has never been formally called games' mistress, and though usually present in the field herself, she is always able to find others on the staff to help or replace her if necessary.

The games we adopt as the staple school games are cricket for the summer and hockey for the winter months. Lawn tennis we also play in summer, and I should very much like to

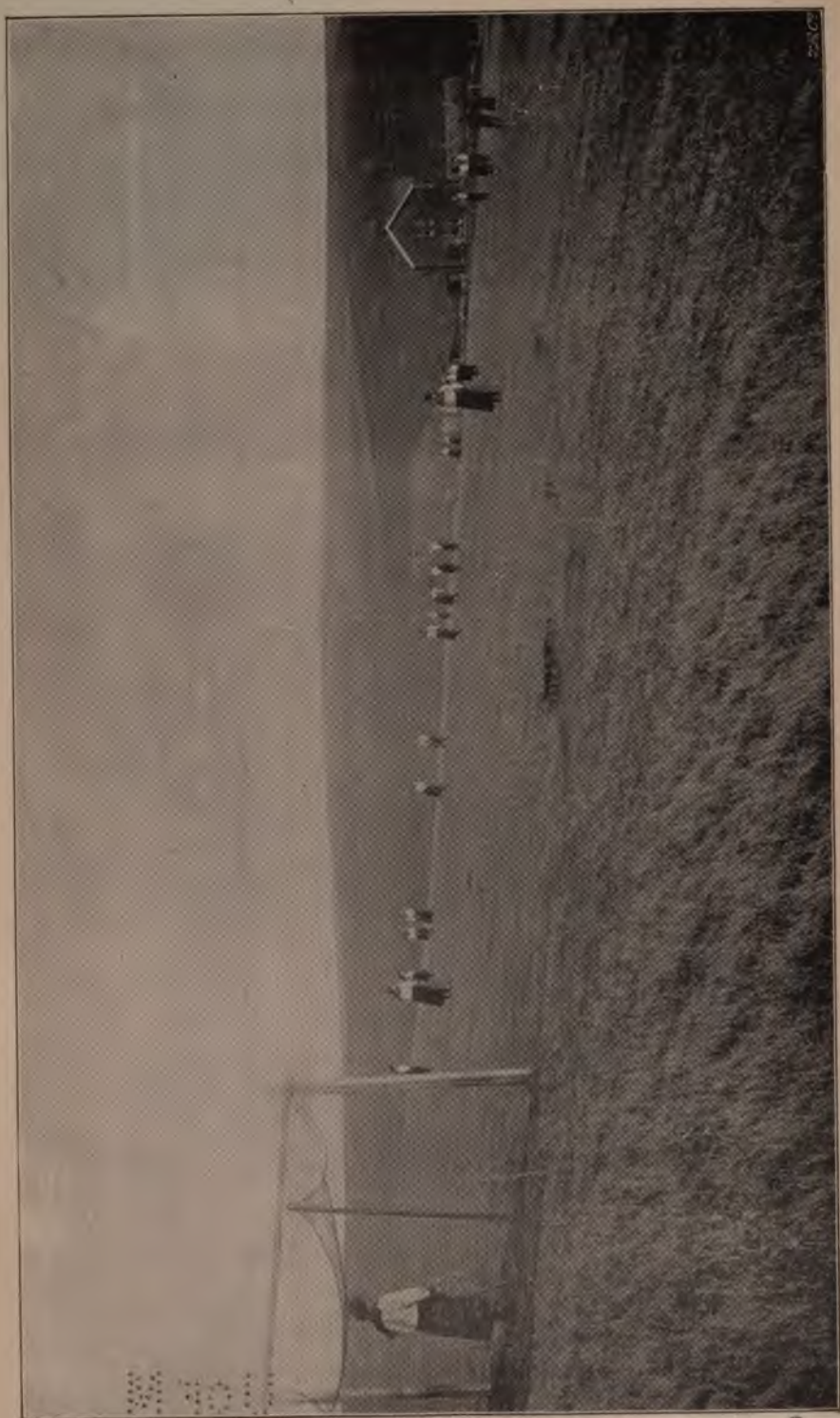


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PHYSICAL EXERCISES IN GIRLS' SECONDARY SCHOOLS.—(4) HOCKEY MATCH AT BORDEAN SCHOOL, BRIGHTON

add fives, as soon as I have the opportunity, to the winter repertoire. We also find rounders useful at the end of the Lent term, when it is often too hot to play hockey and the time is too short to begin cricket. We have adopted hockey and cricket mainly for the following reasons:—

First, it is of no use to offer girls between the ages of 14 and 18 games which they feel to be trivial. The only games which are not so felt, and which are capable of holding the interest for a whole season, are games which have been elaborated by many generations of players, which have become scientific because they have been long and widely played, and which consequently have an interest for many people. The two chief national games of this country, which in an eminent degree possess this element, are cricket and football. The latter game is, however, to my mind, for many reasons, quite unsuited to girls.

The best substitute is hockey. Its general aim and idea is much the same, and it is very largely played by boys and men, and girls who have left school. It is scientific enough to be highly interesting, it is thoroughly good exercise, it employs large numbers at once, and calls for considerable skill and endurance.

But if football is out of the question, that is not true of cricket. There is nothing inherently unsuitable in this splendid national game. It is the game of Englishmen all the world over, and the interest it inspires lasts quite into old age. It is a strong social bond between the mother country and the colonies, between class and class, and race and race. It is impossible to limit the interest of the game to one institution or set of people. A boy or girl who plays cricket enters a world larger than his or her own narrow sphere, and is induced to care for impersonal ends beyond the immediate circle of the home or school. It is this larger interest attaching to cricket which, besides the magnificent discipline of the game itself, makes it so valuable for girls, and hence, even at the risk of much opposition and ridicule, we resolved to adopt it in this school, and have now played it for the last twelve years.

The chief objection that has been urged against girls making this game their own is that they can never hope to play it even moderately well—that it is hopelessly beyond their powers. This judgment is a somewhat hasty one, based on observation of girls who have played spasmodically to oblige their brothers in the holidays, and whose untrained performance is often clumsy and defective.

The truth is, cricket is a game requiring great skill and long training. No one who has not played before and who has not played often can acquit him or herself creditably at it. And if girls are to play well enough to enjoy the game, as well as they play hockey or lawn tennis, or to succeed in it as they succeed in any other athletic accomplishment, they must give time and patience to learning it, and be regularly taught. They must practice batting at the nets, they must practice throwing and fielding—in throwing particularly they are apt to be weak,



because they do not as a rule begin such practice at a sufficiently early age (it is so exceedingly unladylike to throw stones), but with such practice, and with the longer time available for out-door life in the summer, girls attain a very respectable standard, even at cricket. They do not, and probably never will, play as well as the Australian team, or as their brothers at Eton and Harrow, but after all, in what athletic accomplishment do they equal their brothers? That really is beside the point—if only they play cricket respectably enough to make the game interesting to themselves, it is good for them to play it, and to have their share of the interest it affords.

Our record throw in the school is 60 yards 5 inches, and there are always half a dozen or more girls who can throw between 50 and 60 yards, and the number of those who can throw a respectable distance is increasing from year to year. Boundary hits of about 100 to 150 yards are not uncommon, and experienced cricketers who have seen our girls play have praised the fielding for its smartness. The bowling is usually overhand. We have a professional cricketer to give us two afternoons a week for net practice, and the style of the batting is steadily improving under his teaching. I mention these details in order to show what is possible for girls, and to encourage them to try. Hockey is being very widely adopted, but very many schools are still content with lawn tennis only for the summer, and though I do not wish to underrate this game, and though we have a very flourishing tennis club with 1st, 2nd and 3rd divisions, house matches out matches, and colours for distinguished players, yet it alone could not sustain the interest of the school for the whole summer.

The objections to games for girls are fast diminishing; we hear less about the evil physical results since the medical profession so largely advocate them. Over-strain, over-fatigue, and other evils may often be traced to the neglect of some very obvious precautions, such as I have pointed out above, and I can say that in this school I have seen nothing of either.

It is again objected that games, notably cricket and hockey, are rough and dangerous. Certainly any game may be played roughly, but that is not the fault of the game, but of the players. Good hockey—hockey played according to the rules made by both the men's and the ladies' Hockey Associations—is not rough or dangerous. We have had during a period of twelve years not more than three or four injuries incurred during hockey which called for medical aid, such as a cut on the forehead, or a sprained wrist or ankle. For general school use we have adopted the little light stick, one inch in diameter, so that the really dangerous players, the beginners, do not handle the heavy regulation stick at all. As most of the clubs which the school plays adopt the regulation stick, our first and second elevens possess their sticks and practise with them before each out-match. We have not hitherto found that the general use of the little stick puts us at a disadvantage in playing with other clubs. We win a large



proportion of our matches, and no club can boast of an easy victory over our team. For cricket we have adopted batting gloves and pads after some experience of bruises, and now do not find that the girls sustain injuries in playing. The danger involved in both games is not sufficiently great to counterbalance the numerous benefits to be derived from them, and if we reflect carefully we shall find that none of our daily occupations are wholly free from risk.

There is also the objection that games induce bad manners. It is very true that the old-fashioned courtesy and grace of manner which we prize in the older generation have to a large extent passed away, and manners of the young often do overstep the bounds which our generation has been inclined to set. But it is not the fault of one pursuit more than another which has brought about this state of things. I think that the root of the evil lies deeper, and that the rough and careless manners we deplore are to be traced to want of early home training. I know of no single instance within my experience in which a girl, whose manners were quiet and considerate originally, deteriorated in this respect because she began to play games.

The latest objection, and the one urged with most reason, is that there is a danger of games filling too absorbing a place in a girl's life and in school life, supplanting worthier interests and encroaching on the time for work. No doubt this is to some extent true in boys' schools, and there are signs that it might be a danger for girls' schools also. But the danger both for girls and boys is more apparent than real. I have seen in my own school, and I am told it is true of other schools too, that as a rule distinction in games and athletics, and earnestness in work go hand in hand. Those individuals whose energy and vigour lead them to throw their heart and soul into the games—who bring qualities to bear which cause them to excel—will have the energy, enthusiasm and the physical power to bear strain, which lead to success in work also. In a few cases this is not so, and what energy and capacity a boy or girl possesses is put into the games only, and steadily withheld from the work. What then? Does it follow that they would have worked if there had been no games? Probably they would only have been the worse human beings, and have had nothing they could do well in life. Now at least some qualities are developed and physical health and strength are gained, which will carry them through life less wearily and monotonously than otherwise. And even were this picture not a true one, were it so that in some cases powers and time which would have been given to work have been given with too much zeal and absorption to games, is this an irremediable evil? In those persons where the capacity exists for strenuous intellectual work and for graver interests, exclusive absorption in athletics is abnormal, and can be only a passing phase. Youth goes through many phases, many enthusiasms, and does not often know moderation. It is no really unworthy enthusiasm, and this being so, ought we not to have patience and not be too hasty to condemn?

As a rule, the games re-act well on the school work, and cause it to be done with more vigour and interest. At all events, judging by our Annual Examination results, it does not seem to me as if the games as played by our girls had as yet in any way interfered with their work. In fact, I do not at present find that any arguments which have been advanced against out-door games for girls are of sufficient weight to balance the undoubted advantages to be derived from their adoption.

PENELOPE LAWRENCE,

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*Associate of Newnham College, Cambridge.*

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THE ORGANISATION OF GAMES OUT OF SCHOOL FOR  
THE CHILDREN ATTENDING PUBLIC ELEMEN-  
TARY SCHOOLS IN THE LARGE INDUSTRIAL  
CENTRES, AS VOLUNTARILY UNDERTAKEN BY  
THE TEACHERS.

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The education of children may be broadly divided into two parts, the one relating to the intellectual, the other to the physical well-being of children. It will at once be granted that one is necessary to the other. During the last 25 years the intellectual education of the children in primary schools has undoubtedly been studied with increasing care, but a proper sense of the proportion the physical bears to the mental growth of children has often been wanting.

Schools have been built every year of a better type than in the preceding years, systems of education have improved, a greater proportion of qualified teachers employed in the schools, the schools have been better equipped, but the playgrounds for the children have not improved to the same degree. It is true that physical exercises have been more and more introduced into the schools, but owing to want of space in the crowded rooms, the often vitiated atmosphere, they are of an extremely limited character, and very often of doubtful utility. As has been well expressed by the committee appointed in Munroe County (New York), to consider the hygienic conditions of their schools, "a certain good is derived from the ten minutes calisthenic exercises, which are almost uniform in the public schools of the country; but, as conducted, these calisthenics become really another lesson, and, therefore, the good is very greatly minimised." This is practically the result in the schools in our own country. What practical teacher has not noticed the faces of his or her children when going through one of the many fancy drills with innumerable changes, and often contrasted them with the happy joyous delight shown by the children when at play in the yard, however "cribb'd" the playground may be. This want of freedom in the physical exercises has fortunately forced itself very strongly upon the attention of teachers during the last 15 years, especially those employed in large industrial centres. The exercises were conducted entirely in school, but the games could be played out of doors. The teachers began to take a closer interest in the outdoor games of the boys particularly, and "sides games" began to be arranged in the playgrounds wherever they were large enough. From games and contests amongst themselves, the next step was a contest or "match" with a team from



the neighbouring school. The boys have in isolated cases, no doubt, had these contests amongst themselves in most districts ever since schools were formed. But they were spasmodically arranged, and carried on without any proper organisation, and very often ended in disputes. The great impetus given to the game of Association football in the early eighties began to affect many teachers, who saw in the game a simple, ready, and pleasant means of physical education. School clubs began to be formed here and there, and the happy idea struck Mr. W. J. Wilson of Balham, that some organisation was necessary for the proper control and supervision of the games played, when school was pitted against school. Mr. Wilson called to his aid Messrs. Stokoe, Cavill, and other teachers, and the first Elementary Schools' Football Association was formed under the title of the South London Schools' F. A. in 1885, the beginning of a movement which was destined to become national, and which has done more for the real physical well-being of the boys of this country, than all the drill and calisthenic exercises yet introduced. There is scarcely a town of any size which does not possess an organisation of schools for the promotion of either football or cricket. In order that the position may be properly understood, it will be necessary to describe the nature and functions of these organised bodies of schools. As stated above, they were formed for the proper supervision of the various inter-school matches, first of football. A representative from each school is selected, and these form a committee together with the usual officers, such as a chairman, vice-chairman, treasurer and secretary, who almost invariably are teachers. The schools forming the association are grouped together in districts varying from four to eight. Each district becomes a league, and each plays the other "home" and "away" matches. Each school team is placed under the care of a master, generally one of the class masters who is an enthusiast, and he very generously gives up an hour for one or two days in the week in the dinner recess for the training of the boys in practice games. The fixtures with the other schools are played on the Saturday morning, under the direction of another master as referee, whilst many of the staff of the school, as well as the competitors' playmates, line the ground as spectators, to encourage the players. Thus the practices and ordinary school matches are constantly played under the supervision of the various masters in charge of the team, and with many other masters looking on. The masters and pupils are thus brought into close contact with each other out of school on the field of play, and a spirit of comradeship and mutual respect, awe, and of deep affection is created, fostered, and encouraged. The boys are not slow to perceive that this means more than a professional interest in his welfare by his teachers. He knows that his master has had many weary hours with him in school, and yet gives up his hard earned leisure for his benefit. In this paper it will be shown that he learns to appreciate this, and tries in turn to give less trouble in the work of the school, strives more earnestly to follow his teacher's wishes, and becomes much more amenable

to discipline. The game itself teaches him the necessity for the sinking of selfishness, and the cultivation of combination, if success is to be secured. He is taught that he is a part of a united whole, all the parts of which must work together to win and hence whilst at play, he is being trained at all times to understand, whether in school or out of school, the necessity for mutual and combined effort. He is taught that if his team is to win its two points, each boy must do his very best, and he does it. Two points are given for a win, one point for a draw. At the close of the league tournament, the two top teams are dubbed champions of the league, and are then drawn together with the champions of the other leagues, for the final competition for the shield or cup, and silver medals, which are generally given to those who succeed in reaching the final tie. Many trophies have been secured, and the Liverpool trophies make alone a valuable collection. The final tie creates great interest in every association, the parents and friends of the children attending in large crowds to watch the final struggle. The teachers and parents are thus bound together in one common community of interest in the children, a bond of great educational value, too obvious to be commented upon. The winning team secures a trophy to be held by the school for twelve months, whilst the competitors, winners and losers, receive silver medals to be kept by them as mementoes of their prowess and skill, presented on an occasion, and under circumstances which enhance their value in the eyes of the recipients. These trophies and medals are provided either by some gentlemen interested in the schools, or, oftener than not, by subscriptions from the teachers and their friends. The possession of the shield and medals is eagerly striven for, and, as one who has been the proud custodian of such a trophy, one can bear testimony to the pride and interest taken by the whole school in its possession. Even the "seven-year-olds" have been heard, talking of "our silver shield," and its influence is such that a "spirit" is developed in the school, that may become of the greatest educational value. From pride in the athletic success of the school, it is an easy step to the cultivation of a pride in every branch of the school work. The bringing of the parents together at the final tie is not all. With the growth in the number of school organisations in the larger towns, come a new and larger interesting competition, inter-town contests. The Sheffield Schools' F. A. invited the pioneer organisation, South London Schools' F. A., to send a team of their best boys to play a friendly match at Sheffield against a team of the Sheffield boys. They accepted the invitation, and the match took place at Bramall Lane, the famous Yorkshire ground, in May 1890, in the presence of several thousand people, who were capable critics of the game. The play of the boys in this first inter-town match aroused the utmost enthusiasm of the spectators, who were loud in their praises at the magnificent play of the boys. The training received at the hands of their teachers was practically demonstrated. The boys on both sides played in a



style which, while determined, was not rough, keen yet fair in tackling, an entire absence of shady or doubtful play, every boy doing his utmost to win; yet at the close, when London had won by the narrow margin of one goal to nil, the display of the Sheffield boys proved they had learnt the more difficult lesson of knowing "how to lose;" all this produced an effect on the spectators not easily forgotten. The following season they again met, when London were able also to show that they were as good "sportsmen" as their Yorkshire schoolfellows, the game resulting in favour of Sheffield by five goals to three. Since then the inter-town matches have become general, and South London, Sheffield and Manchester have carried on the interesting struggles up to the present time. The Oval, a classic ground known to every lover of cricket, has been the scene of combats between the three cities, which have become historic in the annals of school football. Twice have schoolboy teams been selected to play before the final tie for the English Cup; Manchester *v.* Sheffield in 1894, at Manchester, in the presence of 40,000 spectators, a game which those who saw it still speak of with pleasure; and the South London *v.* West Ham Schools F. A., for the Corinthian Trophy, in 1897, at the Crystal Palace grounds, in the presence of the largest concourse ever gathered together on one ground. These great games have been the means of attracting many people to watch them, who go to no other games but those amongst the boys.

Great as has been the progress of these organised games, inter-town, inter-league, and inter-school, they would have been universal, almost, to-day, if it had not been for the lamentable lack of suitable open spaces in or near the great towns. Many schools have not even playgrounds where they can practise a modified game, and when they have no open ground nearer than three or four miles, it will be seen that they cannot compete in the competitions for lack of practice grounds. We find ornamental patches, very small parks laid out in winding walks; but a level piece of green sward is either absent altogether, or is fringed with "Please do not walk on the grass." The children are forgotten, and are driven to play on brickfields, or any croft that they can reach. One cannot imagine a greater piece of irony than to see the youngsters trying to play cricket on a brickfield or rough open space, full of little pits and pools of water. Yet they do it, or at least try to do it. In some of the London parks pitches have been set aside for the schools on Saturday mornings, and the authorities have thereby earned the gratitude of the children and their teachers. Liverpool and Brighton and a few others have succeeded in securing similar privileges. Surely more could be done by combined public effort towards providing towns with more open spaces where games could be played. From football in winter many of the associations undertake the supervision of cricket in summer, which is supervised under nearly the same conditions as the football. There are not nearly so many engaged in this work, largely owing to the fact that the grounds available are not



suitable for cricket, which requires a better ground than its sister game of football. The extent to which the game is organized may be seen from the particulars set forth below. Similarly, full reference has been made to the work undertaken in the teaching of swimming, which is carried on in most large towns, but seldom on so extensive a scale as by the London Schools Swimming Club. The Schools Football and Cricket Associations found that the scope of their work was not complete when taking cognizance only of the two great national games of football and cricket. They extended their operations, and many of them have for the last few years become athletic associations, for the promotion of an annual event of school sports, open to all the children of the town or city. The programme of these sports has enabled the teachers to bring the girls into active participation in some athletic exercise. Previous to their inception, swimming was the only form of sport in which definite provision was made for girls. Now they have flat races open to them, as well as bicycle, standing skipping-rope, and running skipping-rope contests, and the progress they have made in these sports is marvellous. The girls have now, therefore, opportunities of being trained to a freer and more healthy use of their limbs than at one time seemed probable. The ordinary programme of the children's sports, now so general, include such events as 80 yards, 100 yards, 120 yards, 220 yards, 440 yards, half mile, and one mile flat race (for older boys), the shorter distances having separate events for girls as well as boys, football dribbling races, bicycle races for boys and girls, tug-of-war, harriers' races, skipping-rope contest (standing and running), egg and spoon race, obstacle races, and various championship events. All these are so arranged that each competitor is handicapped according to age and size. In Manchester, Sheffield, Liverpool, Leeds, and Sunderland, the Annual Sports is the "red-letter day" of the year, and is eagerly looked forward to by the children and the parents. In some of the towns the sports are held on a day in mid-week, and a special half holiday given for the purpose. The organisation of these events is no light one, and for weeks beforehand taxes the energies and skill of the teachers, who feel rewarded when they see the happy faces of the children, the gratitude and affection of the parents. As one of H.M. Chief Inspectors once remarked, "They are wonderful object lessons as to the teachers' power of organization and self-abnegation." One cannot help saying that the children owe a deep debt of gratitude to the teachers throughout the country, especially to the class teachers, who season in and season out sacrifice so much of their time voluntarily for the children's benefit. In some of the towns the teachers have received some reward in the splendid way the parents have supported them in important matches for their charities, when the inter-town schoolboys have played. The Sheffield Schools' F. A. has in the last ten years raised over 1000*l.* in this way for the teachers' charities, whilst Manchester has contributed nearly 700*l.* But in the main, the work is

carried only by much self-sacrifice, and with an income barely sufficient to meet the expenses of the general association. The time has now arrived when some provision might be made for the boys to be taught these games in school-hours, or at least that the fixtures might be carried out at such a time, where it can be shown that the boys are under proper training, and supervised by teachers, as they are in schools affiliated to one of the school organisations. There are difficulties to be met, I know, but the building up of the youth of the country into upright, manly, healthy, vigorous citizens, is surely worthy the attention of the State.

The question naturally arises, what has been the result of all these organisations and their work upon the boys in the schools? Has it been such as to justify the continuance of the work, and to urge an extension of it? The answer to these questions will be found in the notes contributed from the secretaries in the various towns, some of which have been taken at random, and are given below. The founder of South London F. A. writes: "They provide the means of a healthy exercise during the winter months, carried out in a thoroughly systematic manner, and under the most careful supervision. The benefits are showing themselves in the constitutions of our scholars in no small degree. We cannot help noticing the great difference in the physique of our old pupils who were regular players as compared with those who rarely or never played the game, a game (football) which in my opinion is without its equal among the many excellent games fostered and played by boys." The Northampton secretary: "My committee wish me to emphasize the fact that their present scholars of 10 and 11 years of age are stronger and larger than their boys of that age before the association began its work. Also that the boys who take an active part in their school athletics are rarely absent from school through illness. The sight of these healthy fellows trooping into the schoolyard with their games' apparatus from the cricket or football field, before the morning and afternoon sessions begin, speaks volumes for the physical benefits reaped by them. Our schools athletics form a strong inducement to boys to stay at school as long as they can. As our rules require regular attendance from every competitor, boys attend very regularly." From Bristol a headmaster writes: "The moral training the boys receive at cricket is worth having, they are taught to see that it is only by helping one another in the game that they win. They are also taught not to lose heart at a bad start, and they have learnt not to complain or chaff another boy who makes a mistake." From secretary West London F. A.: "The effect upon the boys who participate cannot be too highly estimated both physically and morally; it makes them sounder and stronger in body, and certainly has an important moral effect, teaching them as it must, to restrain and control at all times their tempers and passions. It also binds them more closely to their schools, and they become more and more a part of it, as they are continually striving to uphold its honour and prestige. The



effects of school games on the influence of the teachers, too, should not be lost sight of. By being with the boys at other than school hours, one becomes more in touch with them, and the influence one has over them is undoubtedly considerably strengthened—influence of the right kind, too—not that which is simply brought about by fear, but chiefly by respect and due consideration for those who take so much interest in their welfare." The testimony from Leicester is: "The benefits to the boys we have found to be very great, both morally, physically, and mentally. Morally, the fact of a truant or cheat not being allowed to participate in the games has had a reforming influence in several cases in Leicester, far different to any kind of punishment tried before, and most of these boys since leaving school have joined the "old boys" teams, and so are still under our care and guidance, and bid fair to become good citizens. *Physically*.—We have undoubted proof furnished by the parents of delicate and timid boys, who have by reason of the games become healthy, strong, and fearless. *Mentally*.—The mixing up of boys of various mental capacities has tended to show the clever boys, that after all there may be some good points about a boy who is often classed as dull, as generally speaking, some of our best players are boys who have not made a great name as scholars, but who undoubtedly try better with their lessons than was formerly the case" (and very often succeed). From Cardiff: "It has been well said, 'The mind ought never to be cultivated at the expense of the body,' and physical education should precede that of the intellect, and proceed simultaneously with it, without cultivating one faculty to the neglect of the other, for health is the base, and instruction is the ornament of education. With athletes the teacher has little to do, but with healthy, active, and happy children a very great deal. Indirectly the teacher is to a considerable extent answerable for the physical development of his pupils. He can do much to encourage recreation and useful games, and at the same time he can keep within proper limits any that tend to overtax their strength. Outdoor games under proper supervision not only tend to build up a healthy body and a vigorous mind, but aid in the formation of such habits as promptness, courtesy, unselfishness, self-control, generosity, good sportsmanship, good humour, and, in general, ability to discriminate between 'right' and 'wrong.'" The Secretary of the London Schools' Swimming Association writes: "Teachers and children alike are in real earnest in the matter, and in the opinion of some members of the London School Board—sympathetic watchers of our work—'Swimming is one of the brightest spots in the educative work of London, and claim for our Association a very large amount of moral influence. I think it one of the strongest claims to public recognition that we can make the intimate relation between cleaner lives and cleaner exteriors. Hoxton is notoriously poor, squalid, and criminal, yet I positively assert that I have seen Hoxton boys weaned away from the strong influence of environment by a knowledge of swimming, and especially by pre-



eminence in the art. Good sportsmanship is certainly engendered—boys learn to take a licking uncomplainingly, when they have done their best. Teacher and pupil are drawn together in a way which hardly any other sport can effect. I never feel so intensely the 'big brother' of my boys as when I am in the water with them. It is a real new bond. Our school reports have several times noted the fact that swimming has improved the tone of the school. It also fosters what is known as 'the public school spirit.' From Leeds: "There has been a genuine physical improvement in the health of several boys, one parent begging that her son, who had been left out of his school team, might be replaced, as it had made a 'new boy' of him. Boys do their work in school better, and it is a singular fact that nearly all the boys who have won scholarships from the elementary schools are footballers. The language of some of the boys out of doors was bad, but owing to the penalties imposed, and the mixing of the different classes, it has almost been stamped out on the grounds. The Jewish boys have ceased to be ignored, and have benefitted largely by the mixing of the scholars from different schools. It has improved the attendance, created an interest in the various schools in the doings of the boys, and boys who would have left at 13 years of age, and run about the streets waiting for work, stay on to play. Even the evening school pupils in some evening schools have asked the teachers to organise an association for them." From Sunderland: "We have found that the football has been of great benefit to the boys in many ways. We have cases of boys who, previous to the introduction of the game into the schools here, were inveterate truant players, having been cured of this by being placed in the football team of their school. There are other instances of boys who were dull at their books being very quick at football, and through their skill in the game they have gained the respect of their schoolfellows, and a marked improvement has been noticed in their school work." Mr. T. C. Pear, the Secretary of the London Schools' F.A., writes: "I can unhesitatingly speak highly in praise of school football. That it aids the boys' physical development I think no one would dispute, but its advantages in a truly educational sense must not be overlooked. Patience, perseverance, determination to overcome difficulties, pluck, dash, thorough control of temper, are instilled into a lad with his football training. And when there is added the love engendered for playmates and teachers, combined with an immense enthusiasm for the success of his school, I think it must be acknowledged that football games go a long way in training boys to become good citizens. But in order to secure the necessary enthusiasm, school must be pitted against school, districts against districts, towns against towns, in friendly rivalry; hence the necessity for association of schools, challenge cups and trophies."

Equally valuable and striking testimony is given by other writers, who have had practical experience for several years of the work of the school organisations in our great towns. One

can bear personal testimony to the accuracy of the conclusions set out above, after over twenty years' experience on football fields in every part of the country, that since the introduction of these organised games, there has been a distinct improvement in the physique and general bearing of the boys, who play or have been players. The training necessary to produce sound wind and sound limbs, must produce a soundly built boy, and had time permitted, statistics of a very valuable and startling nature could have been tabulated.

Below will be found a brief statement of the "work done" in several of the towns. Many more there are whose records have not been obtained, and to these towns apologies are due, but herein is set down only what can be verified from official statements and records.

**BLACKBURN.**—*Football.*—The teachers of Blackburn have formed a remarkably successful Schools' Football Association during the present season, all the schools in the town, 35, being members. Although in its first year, great enthusiasm has been aroused, and naturally so, for it is said in Blackburn every boy knows how to play football. The "Competition" trophy has been presented by Mr. Harry Boyle, and the final struggle for it will take place on Shrove Tuesday, the celebrated "Blackburn Rovers" having kindly lent their ground for the purpose.

**BIRMINGHAM.\***—Apart from the regular and systematic physical exercises carried on in all the Board and most of the denominational schools of the city, a very comprehensive scheme exists for the encouragement, promotion, and control of outdoor sports and pastimes.

The scheme is a section of the work of the Birmingham Athletic Institute, by whom it is fathered and financed. It is managed by a Committee of eight—Board, Denominational, Head and Assistant Masters having equal representation—with a Member of the Institute Council as Chairman, and the General Secretary of the Institute Secretary of this branch also.

Challenge shields are put up annually for competition with medals and books as individual prizes, as well as rewards for teachers who have had charge.

These competitions are open to all the elementary schools of of the city—Board and voluntary—and the latter year by year figure prominently.

The only condition of entry is:—"Competitors must be under 14 years old, and *bonâ fide* scholars. They must have been continuously on the register of the school which they represent for the previous three months, and must remain scholars during the period of the competitions. Boys on attaining the age of 14 years at once become ineligible, although they may have competed in the preliminary ties.

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\* For the following information as to the Birmingham scheme I am indebted to Mr. J. Adams, Head Master of the City Road Board School and Secretary of the Birmingham Athletic Institute.



The matches and contests create the greatest enthusiasm amongst the schools, and inculcate a love and *esprit de corps* not excelled by that of our public schools, and an admiration among the scholars for their athletic champions, equal to their respect for the school scholarship winners.

Although the rivalry between schools is keen, the contests are conducted in an honourable sportsmanlike manner, and a spirit of loyalty to the conditions. This is evidenced by the fact that no protest has been lodged for any breach of rule for the last five years.

The interest is further increased by the leading athletic clubs of the city fostering and partially supporting those with which they are particularly concerned. This co-operation is of the greatest mutual value. It keeps the clubs in touch with what is being done by the juniors, is a nursery for their ranks, and gives the youngsters a keener desire to excel.

*The Docker Cricket Shield* is presented by the Docker Brothers—two famous local cricketers. The final for this is played on the County Ground, with two of the ground professionals as umpires. The County Club provides gold and silver medals to the players constituting the winning and running-up teams respectively, with *Free Passes* to all the county matches for the following season.

*The Football Shield* is presented by the Birmingham and District Football Association, and medals annually to the players in the final tie. This match forms part of the Annual Football Charity Festival, and is played immediately prior to the final for the Senior Competition.

*Swimming.*—The City Baths Committee recognise that the baths, given more boy swimmers, would be better attended by adults. So the learning of swimming is fostered by them, a free pass for the following year being awarded to each boy who learns to swim one length of the bath—about 30 yards.

The finals for the various competitions in connection with this sport are held at the best bath in the city. Some local magnate in the chair, and during the evening the best swimmers from the senior clubs give the boys displays of the different kinds of "finished" swimming.

*The 100 Yards Race* is held on the Aston Lower Grounds Track—the best known in the Midlands—and the course stringed as at a senior meeting.

*Gymnastics.*—The shield for this was presented by the Birmingham Athletic Club, and the prizes are provided by different members each year. The competition is held publicly in the Institute Gymnasium, with the professors as judges.

To encourage the "many," two kinds of competitions are held (1) for individual excellence and (2) standard tests.

The latter are confined to jumping and gymnastics, the school winning that succeeds in passing in a fixed test—the highest percentage of boys, compared with the number on the books.



While in swimming, a shield is similarly awarded to the school that produces the greatest number of boys able to swim one length of the bath.

To facilitate the playing of the ties and matches, the City is divided into four groups and the schools are drawn and play against each other until one team is left in each group. They provide the semi-finals and final teams.

**BRIGHTON.**—The sports and games for elementary school children in Brighton have been taken in hand by the teachers for nearly ten years past. The idea originated in the mind of the late Alderman Saunders, and was taken up enthusiastically by those teachers, who had experienced the great benefits, physical and social, to be gained by a cricket or football club. Athletic sports were held in the public park, and money has been annually collected to provide prizes for competition. The sports have been held every year since, and the number of entries have increased. Children during the summer months practise under careful supervision, and the best are selected to represent their respective schools at the sports. The annual festival at Preston Park is now a red-letter day, and is visited by thousands of people, parents and friends of the children.

*Football.*—In 1892 the Brighton Schools' Football Association was formed, and a challenge cup presented for competition by the Sports Committee. Last year twenty-two schools competed, and two challenge cups were competed for, one for the seniors and one for the juniors. The winners received silver medals as mementoes of their powers. Caps are given to boys who represent the team in inter-city matches. The matches have been played on pitches set apart in Preston Park by the Town Council for use on Saturday mornings.

*Cricket.*—Clubs amongst the schools have not been very successful owing to the want of suitable grounds, but wherever possible the game is played.

**BRISTOL.**—*Cricket.*—We have not received a complete statement from Bristol, but we learn from one of the head masters that there is a league of schools for cricket, a shield being given to the champions selected on the league principle. This year two schools tied for this honour, and a final tie was necessary, the same being played on a pitch on the county ground, selected by the redoubtable Dr. "W. G." Grace. The winning team received silver medals presented by two members of the School Board.

*Football* is carried on under Association rules, and a challenge shield offered for competition amongst the schools.

*Swimming* has been taught for many years, and a challenge shield offered for competition.

**CARDIFF.**—The Cardiff Schools' Football League was formed in 1896, and hence has had only one season, ten schools joining the league. A cup was competed for, and silver medals were given

to the winners and runners-up, or the teams that played in the final tie. Inter-city matches were played against Newport and Barry. This season promises well.

Athletic sports have only as yet been held by the central higher grade school, but it is hoped to have a general "sports day" this year.

There may be other school leagues, but we have no information of any other *organised* leagues in Wales, although it would appear from the above that Barry near Cardiff, and Newport have town teams.

GATESHEAD.—*Football*.—The Gateshead Schools' Football League has been in existence since 1895, and now numbers seventeen schools. They are divided into two leagues, and have the unique advantage of playing on a football *field*, which we are told is the property of the School Board. A silver cup is the trophy, the gift of Mr. C. Lyall, and the winners and runners-up are awarded silver medals. Inter-city matches have been played against Sunderland, Newcastle, South Shields, and Tanfield with marvellous success this year. Here, as elsewhere, universal interest is taken in the work by teachers, parents, and children.

HALIFAX.—We have no particulars respecting the Halifax Schools' F.A., but one school, the higher Board school, have such a unique scheme in operation for games that we make no apology for its insertion here. Mr. Wm. Dyche, B.A., the head master, writes:—

"We have no organisation here in Halifax (?), but it may interest you to know that the school hires a field adjoining the school. In this field each class takes a three-quarter hour lesson per week in Association football, and the same in cricket during the cricket season. We do this instead of drill. As nearly all our classes number less than thirty, and one or two boys are always away, we can generally make two elevens per class.

"We did this all last year, only we had to play in our large playground, instead of in a field. Besides the in-school practice games there were usually ten matches a week played out of school hours between the different classes. We wound up the season with a class championship on the lines of the cup-tie plan.

"I found that the adoption of football instead of drill smartened the boys up considerably, and make great improvement in the *esprit de corps*. Class got to know class, and there was much emulation to get into the school team. I should add that in the in-school games the teachers acted as referees. In the out of school matches they generally did so, but this was entirely at their option. I should look with much suspicion on any scheme that called upon the teachers to attend out of school hours.

"Playing regularly and under direction the boys learnt to play in a sportsmanlike way. As our game was 'Association'



we found a difficulty (Halifax is a Rugby centre) in getting many fixtures outside school. Still we got one or two good matches."

**HUDDERSFIELD.**—*Cricket.*—The Huddersfield Schools' Cricket League was established in 1894, and the competition for the "Marshall challenge shield" was at first conducted on the league principle, but is now conducted on the cup-tie principle. The number of schools entering vary, fifteen to sixteen being about the average. Several gentlemen for the last two years have provided silver medals for the winners.

*Athletic Sports.*—These were carried on for three years prior to 1894, but the support given by the general public was not good, and they were abandoned, the Cricket League being taken up in place of them. This is the only instance where annual sports, once taken up by the schools, have been abandoned. Knowing the town well as we do, we marvel at their want of success.

**LIVERPOOL.**—Mr. W. R. Smith, of Liverpool, supplies the following:—

*Cricket.*—The interest of teachers in children's athletics in Liverpool dates from 1881, when Claude Guinness, Esq., H.M.I., presented a trophy for competition in cricket. A system of games was then organised, but they ceased in 1884, and nothing was done until 1886, the trophy remaining in the hands of the last winners. In this year (1886) the members of the Association Committee and one or two others, subscribed to provide a new cup, and since then the competition has been continuous. Last season the original cup was re-presented to the Association, and cricket is now played in two sections, a senior and a junior. Silver medals are given to each member of both teams in the final match of both sections. The interest in the competitions is widespread.

*Football.*—In 1891 football was commenced and has flourished ever since, over 40 schools taking part in last year's competitions. Two cups, the "Gilbert-Moss," and the "Edwards-Moss," are provided and silver medals given as in cricket. The league system has been adopted and inter-Association matches played with Manchester, Sheffield, Nottingham, Preston and Northwich.

*Athletic Festival.*—In 1892 an athletic festival was held and was a pronounced success. The number of entries was very large and has increased each year, the number in 1896 being over 2,000, while the number of spectators has exceeded 20,000. Many prizes are awarded, and four trophies, the "Rathbone," "Oulton," "Liverpool," and "Major Lester" shields, are specially provided for displays in physical exercises. The profits of the festival are sufficient to cover the expenses of all the other branches of sport. This year, being Jubilee Year, was partly signalised in Liverpool by the Municipal Authorities by arranging for children's sports in the parks, and the Teachers' Association, from their known work in the matter of children's



athletics, was asked to take the arrangements in hand. They did so and held four festivals in four of the public parks simultaneously. There were nearly 10,000 competitors, and the attendance of the spectators was very large.

*Swimming.*—In 1893 arrangements were made for holding a swimming gala, and one has been held each year since, and all have been very successful.

A cup, the "Houlding Challenge," has been presented for squadron racing, and valuable prizes are awarded to the winners in the various events.

Certificates are now awarded for ability to swim certain distances, so that children who would never win a race may have something to encourage them to learn the art of swimming. The Liverpool Elementary Schools have won the "All England Barker Championship Shield" each of the two years it has been in existence.

**LEEDS.**—*Football.*—The Leeds Elementary Schools' F. A. was formed in 1896, and adopted the Association game. This was a bold step, as Leeds is a great Rugby centre, but there can be no doubt that for boys who desire to practice at noon, and have not time to dress in costume, it is the better game, as no handling is allowed. Thirty-two schools joined, since augmented to thirty-four, a splendid beginning. The city was divided into four districts—now six, and leagues for each formed. Two trophies were provided by subscription, a championship "Shield" and a "Cup." The struggles created immense interest, great prominence being given to the doings of the boys by the local press. The parents have followed the games with keen interest. Inter-city matches were played against Bradford and Manchester, with credit to a first year team, and before great crowds of spectators.

*Cricket.*—No organised scheme has yet been arranged, but it is under consideration.

*Swimming* in Leeds is part of every school course under the Board, the exercise being taken during school hours. Two of the schools have plunge baths of their own. Two members of the Board present "Silver Cups" for squadron races and diving. This is an admirable scheme, and has worked well for years, the school children being admitted to the baths at a nominal sum.

*Athletic Sports.*—The schools sports have been held in Leeds for many years. The average Yorkshireman is such a sport-loving character that in Leeds they hold two annually, one for the schools on the north side of the river, and one for the schools on the southern side. They create great public interest and the entries and spectators are numbered by thousands. They are managed by separate committees of teachers, and the prizes are provided by public subscription.

**LEICESTER.**—*Football.*—The two rival codes of football, Rugby and Association, have each been provided for by the teachers of Leicester, probably the only town where the two games are

properly organised in connection with the schools. (*a*) *Rugby*. Formed in 1894 by the teachers, assisted largely by the Leicester F.C., who generously gave the sum of 20*l.* to provide jerseys, &c., and followed this up by providing a handsome silver challenge shield for competition, whilst some of the members gave gold centre medals for the winning team. The club deserves all praise for such splendid help. Each season the schools have increased, and last year an Old Boys division was formed. This became so popular that this year it has been necessary to organise a junior section of the Old Boys, so that now there are 30 clubs playing each Saturday, the ages of the players ranging from 9 years to 19. Inter-city matches have been played with Birmingham, Coventry, and Northampton. (*b*) *Association*. Formed in 1893 by the teachers, and here again a town club, Leicester Fosse F.C. (Association) have greatly assisted, by granting the use of their ground for inter-city matches; they also give 100 free season tickets, which are used weekly by those who play in the Schools League team. This is a capital arrangement, for the boys see the exponents of good class football, by being present at the second league fixtures of the Fosse. The two trophies here given are a silver cup and a banner, whilst two sets of silver medals are given to the boys in the final, local educationists being subscribers to this end. Inter-city matches have been played with Nottingham and Sheffield.

*Cricket*.—A strong cricket league has been established since 1894, and has met with great success. The Leicestershire County Cricket Club have, like their brethren in the football world, generously aided, by presenting, for competition amongst the schools, a splendid silver shield, and in addition subscribing annually to the funds. A second trophy has been provided in the shape of a silk banner, which goes to the second club in the league competitions. Over 400 scholars took part in the league tournament last year.

*Swimming*.—The Leicester Schools' Swimming Association is as flourishing as the three other athletic associations. The "Sir Israel Hart" shield is offered for team or squadron swimming, which is competed for on the league principle. The winners and runners-up receive medals, and a free ticket for a year's admission to the baths. For individual swimming, a championship shield has been given by Mr. Councillor Hincks, and medals are given to the first and second competitors. Here again the local leading club, the Leicester Swimming Club, assist and encourage the teachers by giving a gala, when the shields are presented to the boys, to show to what perfection the art can be produced.

LONDON.—*Football*.—The first association of schools for the government and organisation of school football was undoubtedly formed in South London, by that pioneer of school athletics, Mr. W. J. Wilson, of Oldridge-road Board School, Balham, about the year 1885. Since then Mr. Wilson and his colleagues have



seen associations rise in almost every large town in England, not merely for football, but athletics in general. Owing to the immense number of schools, and the large area of London, other associations sprung up, until it was found advisable to form the London Schools' Football Association, which is practically a Federation of London associations, numbering twelve. The President is Lord Kinnaird, himself a famous player in the past, whilst amongst the Vice-Presidents are to be found many of the leaders in the football world. The Corinthians F.C. have shown their sympathy with the movement by presenting for competition a Thirty Guinea Challenge Shield, which is strenuously struggled for by the association teams. In 1897 the final tie was played before one of the largest concourses of people ever gathered together, over 60,000, at Crystal Palace, on the occasion of the final tie for the English Cup. It was a fitting result, when the trophy was won by a team of boys, representing the South London Schools, where the movement had its birth. Medals were given, and Miss Jackson, sister of Mr. N. L. Jackson of the Corinthians, gave each boy a very handsome Jubilee Knife, as a souvenir of the great game. Mr. T. C. Pear, Fulham, is now the energetic secretary of this great organization. The following Associations are members:—

**SOUTH LONDON SCHOOLS' F.A.**—The pioneer of school associations founded in 1885, by Messrs. Wilson, Cavill, Stokoe, Sargeant, Haydock and Molton. These names are specially mentioned because they were the first body to crystallise what had up to then been only thought of. After twelve years' work the interest is still so great that 35 schools are members. There are three trophies, one for the seniors and two for the juniors, divided into Eastern and Western leagues. They also won the Corinthian Shield from the other London associations and scored no less than 73 goals against 4, winning 7 inter-associations matches, losing 0, and drawing 1,—a splendid record. They are also the pioneers of inter-city matches, some of their games against Sheffield and Manchester having become historic.

**ENFIELD.**—Affiliated to the London Schools. Formed in 1896, and has done well for the first season. A challenge cup is provided for local competition, and silver medals given to those boys in the final tie. A cricket league has been formed, and the "Halsey Cup" provided for competition.

**FINSBURY.**—No report received, affiliated to the L.S.F.A.

**GREENWICH.**—No report received, " " "

**HACKNEY.**—No report received, " " "

**LEYTON.**—Affiliated to the London Schools' F.A. Formed in 1894. A handsome shield is competed for, and has been won by Newport twice out of the last three seasons. Their last season's record is worthy of reproduction. Matches played 24, won 22



drawn 2, lost 0. Goals—for 177, against 11. Where one team was so far ahead little interest was taken for premier honours, but a keen struggle took place for second and third positions.

**MARYLEBONE.**—Affiliated to the London Schools' F.A. This association covers almost the whole field of sport—Football, Cricket, Swimming, and Sports, and we gather from their report they propose to organise a Lawn Tennis Tournament for girls, a novel and a decided step forward. In *Football* 17 schools entered for competition, a cup and medals being provided for the seniors, and a shield and medals for the juniors. Cups are also given to boys who play in the majority of the matches. *Cricket.*—Two shields, one for seniors and one for juniors, with silver medals for winning teams, together with prizes for batting and bowling, are open for competition. Such prizes must provoke healthy competition. *Swimming.*—Twenty-one schools entered for this branch, and two shields are again open for competition, one for girls and one for boys. Children also competed in the London Schools' Swimming Competitions very successfully. *Sports* at Tufnell Park were brilliantly successful, there being 1,247 entries. Altogether the teachers of Marylebone have a splendid record of all round work on behalf of the children.

**TOTTENHAM.**—Affiliated to the London Schools' F.A. A very flourishing association. *Football.*—Eight schools entered the League, the "Pioneer" Cup being competed for by the schools. Attention has been paid to junior school boys, with the idea of forming a League. The Association team won all its divisional matches in the Corinthian Shield contest, and were beaten only by the ultimate winners (South London). *Cricket.*—Thirteen schools entered, and were formed into two divisions, and spirited contests ensued.

**TOWER HAMLETS.**—No report received, affiliated to L.S.F.A.

**WEST HAM AND DISTRICT.**—No report received, affiliated to L.S.F.A.

**WEST LONDON.**—Affiliated to London Schools' F.A. Established in 1891. Two challenge shields are open for competition, one for the seniors, and one for the juniors. Six schools entered for the former and eight for the latter. Medals and cups are also given to winners of the championship. The Association team had a successful season, and met the Brighton schools with the result 1—1.

**WOOLWICH.**—No report received, affiliated to L.S.F.A.

**EALING.**—*Swimming.*—This important branch is fostered by the Ealing Dean Swimming Club, who have established a shield competition open to teams from the elementary schools. Several members of the club, assisted by the teachers, have given their time and labour freely, and have been remarkably successful in their efforts.

LONDON.—The London Schools' Swimming Association was formed on its present basis in 1893, to promote the teaching of swimming to the children attending the elementary schools of London. Its president is Sir John E. Gorst, M.P., Vice-President of the Committee of Council on Education, whilst the Secretaryship is admirably filled by Mr. James F. Freeman, from whose reports we are able to give the following facts. The magnitude of the operations of the Association will at once be seen when we state that there were, in 1896, 25 districts—Battersea, Balham, Bermondsey, Bethnal Green, Bow, Camberwell, Chelsea, East Ham, Finsbury, Greenwich, Hackney, Hoxton, Islington South, Islington West, Kennington, Marylebone, Marylebone West Mile End, Rotherhithe, Southwark West, Stepney, Sydenham, Westminster, Whitechapel, Woolwich—affiliated, with a membership of 362 schools; 18,000 children received instruction, and 12,000 children were taught to swim. One of the most gratifying features of last year's work was the great increase in the number of girls' schools, in some of the districts the girls' schools equal in number the boys' schools. First-class certificates are granted to every boy and girl who can swim 100 yards and 50 yards respectively, and this distinction is eagerly striven for by the children. In order to encourage general swimming the "Daily Chronicle" Shield and the "Fabian" Shield are given as trophies, the former for boys' schools and the latter for girls' schools, the winning of which depends upon the percentage of 1st class certificate holders in the schools. The following is a complete list of the trophies and the donors—a splendid list:

TROPHIES.		DONORS.	
The "Daily Chronicle" Shield	-	The Proprietors of the "Daily Chronicle."	
The "Fabian" Shield for Girls	-	The Members of the Fabian Society.	
The "Fabian" Life-Saving Shield	-	" "	
The "Meath" Cup	-	The Earl of Meath.	
The "Ashbee" Cup	-	C. R. Ashbee, Esq.	
The "Clarion" Cup	-	R. Blatchford, Esq.	
The "Hester" Cup	-	H. Hester, Esq.	
The "Massey-Mainwaring" Cup	-	The Hon. W. F. B. Massey-Mainwaring.	
The "Norris" Cup	-	Mrs. W. B. Norris.	
The "George White" Shield	-	The Trustees of the "George White" Memorial Fund.	
The "Otter" Life-Saving Cup	-	The Members of the "Otter" S.C.	
The "Otter" Junior Championship Cup	-	" "	
The "Synge" Shield	-	Rev. F. Synge, H.M.I.	

(Competed for by Schools in the Hackney Inspectorial District only.)

The branch associations or districts, almost without exception, hold public competitions, a medal being presented by the central committee to the champion boy or girl in each branch. The Southern Counties Amateur Swimming Association and the Life Saving Society take great interest in the work of the association. The Life Saving Society opening its classes for gratuitous instruction to teachers, and annually present eight silver medals and certificates to the most successful of the competing Life Saving teams.

The Council of the Society have established a "Roll of Honour," a record of teachers and scholars who have been instrumental in saving life. Only those cases are placed upon it which have been recognised by the Royal Humane Society. It is already a roll of which the Association can feel proud, and is as follows:

ROLL OF HONOUR.

NAME.	SCHOOL.	SAVED.	AWARD.
Mr. W. Harboard -	Lyndhurst Grove	One life at Yar-	R.H.S. Certificate
Mr. A. A. Kemp -	"Friern" - -	mouth. One life at Sea -	" "
Thomas Targett -	Old Woolwich	Two lives - -	" "
Edward Wambach -	Road. Deptford Lower	One life in the	" "
Charles Thorp -	Road. Cobourg Road -	Thames. One life in Surrey	" "
Richard Lewis -	-	Canal - -	" "
Egbert Perry -	Plough Road -	One life in the	" Medal and
Bertram Day -	-	Thames.	Certificate
Alfred Goodwin -	Popham Road -	One life, Hamp-	" Certificate
James O'Shaugnessy	Blackstock Road	stead Pond.	" "
James Gardner -	Oxford Gardens -	One life, Pond at	" "
	Glifford Street -	Harringay.	" "
	York Road - -	One life, Railway	" "
		cutting.	" "
		One life, Regent's	" "
		Canal.	" "
		Attempted to	" "
		save a life.	" "

Below will be found the system on which classes are taught under the direction of the Association, in schools, and in the baths.

FORM OF LAND-DRILL FOR CLASS-TEACHING OF SWIMMING,  
RECOMMENDED BY THE LONDON SCHOOLS' SWIMMING ASSOCIATION.

*Leg Drill.*

"LEFT LEG."

"READY."—Legs closed as in position of "Attention."

"ONE."—Raise the left knee, left heel touching inside of right knee, toes pointing downwards, left knee kept pointing outwards to the left, in same direction as the toe in "Attention."

"TWO."—Extend left leg by an outward and rounded movement until the big toe touches the ground one pace to the left.

"THREE."—Bring the left leg to position of "Ready."

"RIGHT LEG."—Repeat with the right leg. When proficient, give the word

"CONTINUE" after coming to "Three," and let the class continue—"One," "Two," "Three,"—judging the time—left and right legs alternately. Great vigour must be put into "Three" stroke.

"STEADY."—(To be given immediately before completion of motion). Motion completed, pupils remain steady.

"ATTENTION."



### *Arm Drill.*

"READY."—Both arms extended forward and pointing slightly upward, thumbs touching, palms downward.

"ONE."—Describe a quarter-circle outward with both arms, until they are in line with each other and level with the shoulders, allowing the hands to slightly rotate so that the backs of the hands are turned a very little to the front.

"Two."—Bend the arms at the elbow, and bring the hands to the sides of the chest, slightly to the front, fingers closed and pointing forward, palms downward, thumbs about 4 inches apart.

"THREE."—Resume the "Ready" position. When pupils are proficient, give the word.

"CONTINUE," and allow class to go through the movements judging the time.

"STEADY."

"ATTENTION."

### *Breathing Exercise.*

To be combined with "ARM DRILL."—Inhale the air in arm movements "One" and "Two," and exhale in arm movement "Three."

The exhalation should be a blowing out of air between the lips partly closed.

### *Combined Arm and Leg Drill.*

"ARMS AND LEFT LEG."

"READY."

"ONE."

"TWO."

"THREE."

"CONTINUE."

"STEADY."

"ATTENTION."

Movements exactly similar to those described in the separate Leg and Arm drills.

"ARMS AND RIGHT LEG."—Repeat commands as in "Arms and Left Leg."

### *Swimming Drill in the Water.*

This is best taken in squads—the size of the squad depending on the rail accommodation at the bath.

Pupils take up position in the water, at the shallow end of the bath, facing the side and rail, and in extended order.

"LEG DRILL."

"READY."—Pupils seize the rail by placing both hands underneath it, palms upward, and allow the elbows and forearms to rest against the side of the bath. Then raise the body into a horizontal position, with back hollowed, and head thrown back.

(An alternative method of raising the body:—On the word "Ready," the right hand seizes the bar over the top, the left hand is placed on the wall of the bath, below the rail, palm to

the wall and fingers pointing downward. The body can then easily be raised into the horizontal position).

From this position both legs can be worked simultaneously.

"ONE."	} Movements similar to those described in Leg Drill on land.
"TWO."	
"THREE."	
"CONTINUE."	
"STEADY."	

"HALT."—Lower the body to the position of "Attention."

"ABOUT TURN."—Pupils are now standing round the bath with their backs to the wall.

"READY."	} Movements similar to those described in Arm Drill on land. Hands to be two or three inches below the surface of the water.
"ONE."	
"TWO."	
"THREE."	
"CONTINUE."	
"STEADY."	
"ATTENTION."	

The "BREATHING EXERCISE" should be practised with the Arm Drill in the water.

#### *Practice in Swimming.*

In order that the pupil may apply the drills when learnt to actual swimming, the following methods may be adopted:

1. THE MONITORIAL SYSTEM.—Let your best swimmers take charge of three or four hopeful starters, and give 10 or 15 minutes individual attention to them each lesson—supporting them, correcting errors and practising the weak strokes. A list of new swimmers placed in a prominent place in the schools, with the names of the monitors who taught them, will be found a very strong incentive to pupils and monitors.

2. THE SLING AND ROPE; THE SLING AND POLE.—Both of these aids will be found to be very useful for the practice of the simultaneous movement of legs and arm. Errors may be detected and corrected, and, by gradually lessening the amount of support, the pupil may be led to support himself and make progress independent of the rope or pole.

3. THE PLANK.—A stout plank 3 or 4 inches thick, capable of taking 6 or 8 pupils extended along one side, should be placed in the water. The teacher tells off 6 or 8 pupils who, with arms fully extended, place their hands upon the plank, and raise their bodies to the horizontal position. The teacher then counts "One," "Two," "Three," and the pupils go through the leg movements. The value of this aid lies in the fact that the pupils find that their bodies and the plank immediately begin to make progress, without any assistance from rope or pole.

Issued by the London Schools' Swimming Association.

J. F. FREEMAN, Hon. Sec.,

Wenlock Road Board School,

Hoxton, N.

MANCHESTER.—*Football*.—The Manchester and Salford Schools' Athletic Association was formed in 1890, and the number of schools have varied from 24 to 40. The teachers and their friends provided a splendid silver challenge shield for competition, and after two years a second trophy was given, a silver cup. The city and district is divided into four leagues, the two champions of each league being drawn for the final rounds for the shield and medals. The cup has hitherto (except once) been given as a cup for the juniors, but this season the winners in the final tie will receive the shield, and the losers the cup. Both teams receive silver medals provided by the Association. There is keen competition on the part of the boys for a place in the city team. Inter-city contests have been fought with South London, the last at the Oval being a magnificent contest, Sheffield with whom "home" and "away" matches have been played for the last seven years, Liverpool, Southport, Oldham and Leeds. Several of the best players in the early years of the Association are now playing with league teams.

*Athletic Sports* have been held by the Schools' Association since 1894. For the last three years they have been held at the famous Zoological Gardens, Belle Vue, the School Boards of Manchester and Salford granting a special half-holiday for the purpose. To the children and many of the parents it is "the day" of the year. Over 20,000 people paid for admission in 1897, and nearly 1,000 boys and girls entered for the various races, &c. Prizes were provided by the Association, and two silver cups were given, one, the "Richmond Cup," for the tug of war, the other, the "Scotson Cup," for the mile championship race.

*Swimming*.—This branch is not taken up by the Schools' Committee, but by some of the officials and teachers of the School Boards, in Manchester and Salford separately. Competitions in life saving, for silver badges given by the Royal Humane Society, are held in both county boroughs, whilst prizes are given for distance swimming. There are, we believe, two other district associations of schools for swimming. The city of the champion amateur swimmers ought to have a more organised system.

NORTHAMPTON.—The Northampton and District Elementary Schools Athletic Association was formed September, 1895, by the elementary school teachers of the town and district, the committee being composed of one teacher from each school joining the Association. Entrance fee 2s. 6d.

*Football*.—The Association embraces all schools, Board and voluntary being eligible for membership. Eleven schools joined the Association at its commencement, and an Association football competition was organised for a mounted silver shield presented by A. C. Drucker, Esq., one of the M.P.'s for the borough. Medals are presented to the winners and runners-up in the shield competition. Inter-town matches have been played against Leicester at home and away.



*Cricket.*—In the season just passed, 1897, a cricket league has been organised, and carried out very successfully. A banner is to be provided for the successful team.

*Swimming.*—In 1897 a 35-guinea shield has been offered for competition under the auspices of the Northampton and County Amateur Athletic Association, representatives of the teachers having seats on the committee. This has caused a great increase in the number of boys learning to swim, facilities being given for children obtaining tickets at a reduced rate, 1*d*.

NOTTINGHAM. — *Football.* — The Nottingham Elementary Schools' Football Association was formed in 1891, but now embraces all branches of athletic work. There are about 20 schools in the league, and there are now three trophies offered for competition, the "Smith Wright" shield for the juniors, the "Colonel Seely" shield for seniors, and a third shield, given by Lord Henry Bentinck, M.P., for boys of an older growth. The winners in the various competitions receive silver medals with gold centres, and the runners-up receive silver medals. Inter-city matches are played on the club grounds of Notts Forest and Notts County, and embrace the following teams: Sheffield, Derby, North Staffs, and Liverpool. The matches are well attended, and great interest is taken by the people in the play of the boys.

*Cricket.*—There is no organised league, but several of the schools have teams, but as yet the Association has not taken them in hand, as an organised body.

*Swimming.*—This branch has been carried on for about 10 years, there being no less than three trophies, a banner for girls given by Mrs. Seely, wife of Col. Seely, a second banner for boys, given by Mrs. Arnold Morley, wife of Mr. Arnold Morley, M.P., and third, a shield for boys, given by Mr. E. Bond, M.P. An annual prize competition is held, the prizes being given by local sympathisers. The best children are taught life saving, whilst nearly all are taught the breast stroke. Hundreds of boys and girls receive certificates of proficiency in breast-stroke swimming annually. The last new school has a swimming bath attached. The School Board have taken great interest in the work, and 34 departments are now affiliated to the Association. Special attention has been paid to the instruction and encouragement of swimming amongst the girls, and now combined sports are held. Early morning lessons have been given at the baths throughout the year.

The People's College, owing to its large numbers of upper boys, is enabled to organise a series of inter-class matches, as well as inter-school games, and have therefore been very successful in producing a good all-round body of athletes. This applies both to cricket and football, but it differs from the Higher Board, Halifax, specially detailed, because all the games are played, so I understand, out of school-hours. In swimming the school has won many medals, the championship of the Midland Counties, and in

the National competition ran second to Liverpool (Arnot Street Board) boys, and is regarded as an important feeder to the Nottingham Swimming Club.

**OLDHAM.**—*Football.*—The Oldham Schools' Athletic Organisation formed a football league in 1896, and have been very successful for a first year. A challenge shield was offered for competition in the Association game, and was keenly competed for. The inter-city match with Manchester was watched by a large number of spectators. Oldham being an important Rugby centre, the Oldham Rugby Club gave a cup for competition under Rugby rules, Oldham thus competing with Leicester in having a competition in both codes of football.

*Athletic Sports* have been held annually since 1894, and are eagerly looked forward to by the children and parents. Prizes are given for the usual events, which here include drill.

**NORFOLK COUNTY.**—In the county of Norfolk the promotion of Association football games has been undertaken at the suggestion of the Norfolk County Football Association, who have generously provided no less than six shields for competition, three for the seniors and three for the juniors. The county has been divided into three districts: (1) Norwich District, (2) Lynn District, (3) Great Yarmouth District, the towns named being the headquarters for the respective district. From the rules it would appear that the schools may play either present or old boys, and even pupils teachers so long as their ages are within the prescribed limit, viz., under 14 years for the junior, and under 17 for the senior. This is, so far as we know, the only competition on this basis in the country. The competitions are carried on under the management of representatives from the Board and voluntary schools in each district, together with representatives of the County Club. In addition the Norwich schools have a competition for what is known as the "Terrell Challenge Shield" managed by a separate committee.

**NORTH STAFFORDSHIRE.**—*Football.*—The towns in North Staffordshire have been grouped together, and for several years have had a flourishing association, and have kept it going under great difficulties, the chief being the ever recurring ground question. For two seasons a challenge cup was played for on the cup-tie principle, but through the generosity of the Rev. R. B. Southwell in presenting a cup for the juniors, the interest has been much increased. The junior competition is played on the league principle, and a series of organised games are now carried on successfully. Inter-city matches have been played with Nottingham and Sheffield.

**SHEFFIELD.**—*Football.*—In one of the great sporting centres it is not to be wondered at that the organisation of football games began in 1887 or 1888. For nearly 10 years Sheffield teachers have carried on the work with great enthusiasm, no less than over 40 schools being members of the Athletic Association



Two challenge shields, "The Clegg" for senior and the "Sheffield Wednesday" for juniors, are offered for competition. Silver medals are given to the winning team in both competitions, and to the teachers in charge of each of these teams. The latter being unique, but well deserved. In its inter-city contests Sheffield has ever been famous for its splendid teams. No matter what other towns may do, Sheffield is always able to select a "crack" team to represent the town. They, with South London, are probably the pioneers of these inter-city contests, and since 1890 have met South London almost yearly, Manchester for five years, Sunderland, Liverpool, Nottingham, North Staffs, &c. The people support them well. In school sports they have been no less successful. These have been carried on for very many years, a general holiday being given by the School Board, as the athletic festival is always held on a Monday afternoon, the day dear to the artisan. The "Bingham Challenge Shield" for the quarter mile is the chief attraction, it being held no small honour to become its possessor for 12 months. We shall never forget being present at one of these festivals. There were nearly 2,000 competitors, boys and girls, nearly 50 separate events, and over 15,000 parents and friends of the children as spectators, the whole staff of H.M. Inspectors of Schools for the district, from the chief downwards, together with many of the leading educationists of the town. No wonder that this is a day of days to the children and their parents. The prizes are keenly struggled for, and the training necessary—separate races being set apart for each year from eight upwards—must have done the children an immense amount of good. The massing of all the competitors, boys and girls, for the general parade, the varied styles of dress and costume, for the most part in admirable taste, made up a picture dear to the hearts of all lovers of children.

*Swimming.*—This branch is now conducted by a separate committee, and for the last three years has steadily grown, and is doing an immense amount of good amongst the scholars and the people generally, the committee agitating for special places to be set apart in the streams, acceptable to bathers generally.

**SUNDERLAND.**—*Football.*—The Sunderland Schools' Football League has been in existence for over four years, and has been very successful. The league is divided into two divisions, with nine clubs in the first, and eight in the second. The matches have created great interest, and there is a keen competition for the medals which are given to each member of the winning team in each division. Inter-city matches are played, notably with Sheffield, and it is accounted a great honour to be selected as a member of the city team.

*Athletic Sports* have been held since last year, and have proved remarkably successful. The events are arranged so that boys and girls can compete, the entries this year numbering over 1,200, a programme of great length being carried out in less than



three hours, an occurrence of which the teachers and children may well feel proud. The sports day is here one of the great days, both for parents and children, who attend in large numbers.

*Swimming.*—In this branch of sport there is an association and good work is being done by the members.

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Associations exist in the following towns, but we have received no reports, viz., Barry, Bradford, Derby, Newcastle, Newport, Portsmouth, Rochdale, South Shields, Southampton, Southport, and we doubt not in several other towns.

GEORGE SHARPLES.

[A number of programmes of various athletic associations connected with public elementary schools, showing the way in which their competitions or festivals are organised in different large towns, can be seen at the Education Department Library St. Stephen's House, Cannon Row, Whitehall, S.W.]

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**PHYSICAL EDUCATION UNDER THE SCHOOL  
BOARD FOR LONDON.**

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**SYNOPSIS.**

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Introduction.

Objects of Physical Education in Schools.

System described.

Arrangement of the Exercises.

Adoption of the System.

Military Drill.

Instruction and Examination of Teachers and Students.

Physical Instruction in the Day Schools.

Physical Instruction in Evening, Industrial, and Truant Schools.

Competitions and Displays.

Movable Apparatus—Dumb-bells, etc.

Music applied to Physical Exercises.

• Fixed Gymnastic Apparatus.

Games and Sports.

Swimming.

(Photographs illustrating the above.)

## Physical Education under the School Board for London.

duction.

From the origin of the London School Board in 1870 down to 1889 the physical training of boys received but scant attention. Military drill, and a few indiscriminate free movements selected from the extension motions contained in the military drill book, comprised the sole amount of physical training. The introduction of the so-called Swedish system in girls' schools about 1879 met with some degree of success at first, but it has been considerably altered of late, in order to make it more recreative and suitable to the requirements of English children. In 1882 an attempt was made to introduce the same system into boys' schools, but with little success. In 1889 it was resolved by the Board that physical exercises should be introduced into the schools as a recognised subject, and that head and assistant teachers should take an early opportunity of qualifying themselves to give instruction in physical education thoroughly and successfully. In order to afford teachers facilities for receiving the necessary training, two instructors were engaged—one to teach the Swedish system, and the other to teach the English system. Classes were organised for the instruction of the teachers, and it was clearly stated on the official circulars notifying the formation of these classes that the choice of training-centre was optional on the teacher's part. The course of instruction under each system consisted of twenty-five lessons, each of one hour's duration. Similar classes were formed in 1890 and 1891, the total number of teachers who had undergone the prescribed course during the three years, and thus became eligible for examination, being 461 and 884 in the Swedish and English systems respectively. During the last-mentioned course (1891) the total attendances were 31 and 134 respectively. It was then resolved that, as the English system was rapidly gaining ground, the services of the Swedish instructor should be dispensed with, and that another instructor should be engaged to co-operate with me in carrying out the system which I had introduced. Accordingly, in March 1893, one of the school teachers who had been trained by me was appointed, his duties being to teach the system and superintend the work in the Board's schools of North London.

ts of Phy-  
Education  
sols.

The objects of teaching Physical Exercises in schools are to provide a means of recreation under discipline, and to raise the general standard of health by quickening the circulation, increasing the breathing capacity, promoting nutrition, facilitating the elimination of waste products from the system, and increasing the volume and power of the voluntary and the functional capacity of the involuntary muscles, thereby promoting all-round bodily development and growth.





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Systematic Physical Training renders the senses more acute; and as increased mental activity induces increased muscular activity, the body in general is materially benefited.

Physical exercises for the young must provide healthy relaxation, and should involve little or no mental strain. When a child's mental faculties are overtaxed, the best kind of exercise for it is that which requires no great mental effort in its execution. Exercises of an automatic character, *i.e.*, those that have become familiar to the child through long practice, are preferable to those involving a certain amount of skill or mental activity for their accomplishment. It is irrational to expect the performance of exercises demanding mental concentration when the brain is already overtaxed. Teachers are thoroughly aware of the fact that prolonged mental activity necessitates a period of mental relaxation, and they endeavour to secure this by changing the subject of study. This only partially succeeds in securing the object in view, for mental fatigue will still continue, though perhaps in a modified degree. Complete mental repose can only be secured by total release from all intellectual occupation.

Automatic movements necessitate no great mental effort, and fatigue produced by their performance is purely muscular. Hence it can readily be seen how immensely beneficial it is to engage in such movements when rest for both brain and nerves is required.

A system of Physical Exercises may have either of two objects in view. It may aim at strengthening one particular set of muscles, or at giving a certain amount of exercise to every part of the body. This is what is meant by exercises producing either a *local* or a *general* effect. Some exercises designed for adults have the former object in view, but the latter should be the aim of all exercises intended for school children, special attention being devoted to those groups of muscles which are not brought prominently into play in everyday life. In order that a child may grow up with a well-proportioned, symmetrical body, it is obvious that *every* part should undergo judicious exercise; for any one set of muscles is too weak to withstand the strain produced by exercises which aim at developing that set of muscles alone. If local exercises only are taken with a large class, the more delicate children would soon be fatigued, while others could easily continue the exercises.

In general effect, the development is regular, the circulation uniform, and the whole body benefited by the exercise.

Physical Exercises are quite as worthy the attention of parents as of teachers. For children, exercise is as necessary as pure air, nourishing food, and sufficient sleep. It has been found by careful observation that, in order to obtain the greatest physical good from a child, it is necessary to train him in some branch of Physical Education. Mere muscular development should not be the end in view, although it is indirectly brought about as a natural consequence. The effect of such training is not only shown by the healthy and sound physique of the child, but by the vitality and the improved condition of his mental powers.



The most beneficial system of training which can be made compulsory in schools, especially in those of large towns, is systematic physical exercise with its accompanying essential—Drill. The value of such exercise in such instances is great, as it fills the place of those healthful games in which children would participate where facilities existed. Authorities on Physical Culture agree that, while compulsory Physical Training is advantageous in one direction, it is discouraging in another. It may be observed that when work is performed under compulsion interest is soon lost. Especially is this the case with children, but in a more marked degree. A system, therefore, to be popular as well as beneficial, should combine Physical Culture with amusement. This is why I so strongly advocate a system that will lend itself to variety—one that can, when necessary, be associated with music. To secure the interest of children in physical exercises variety is most essential, and next to this entertainment. Play it must be, under discipline; and in direct proportion as it represents play, so is it likely to meet with the hearty appreciation of children.

In the country and large public schools where it is possible to obtain sufficient space for recreation purposes, games are to be recommended, particularly for the elder children; but when children are restricted to a limited area, as is the case in the playgrounds of the metropolitan and large provincial schools games cannot be advantageously employed. It is here that systematic Physical Exercises are essential, ensuring to each child as much healthy relaxation and exercise as time and circumstances will permit.

With regard to the system of Physical Exercises now taught in the boys' schools of the Board, I do not in any way claim to have originated the whole, the classification and adaptation being the chief points claimed as original. The system was compiled after a careful and practical test of the whole of the methods taught on the continent, in which task I was guided by the experience of twenty years gained in teaching physical culture in all its branches. The various systems in vogue on the continent, though their primary object is undoubtedly an educational one, have another object in view—viz., the laying of a foundation for future military service under a system of conscription—the exercises consisting chiefly of the "setting-up" drill used by the military authorities in their respective countries. Hence any continental system built on these lines is unsuitable for adoption in its entirety in this country. In proof of this it may be stated that whenever any foreign system has been introduced, unless materially modified, the result has been, in every instance, a failure.

The classification of the exercises is a scientific one, and is based on a careful study of the principal joints and articulations in the human body—thus proceeding on strictly anatomical and physiological lines. The counteracting of the prevalent *one-sidedness* of school life, in a physical point of view, and the relief

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(3.)—SURREY SQUARE BOARD SCHOOL, S.E.  
Trunk and arm movements.

ProU





(4.)—MAYON PARK BOARD SCHOOL, S.E.  
Trunk and arm movements.

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1700



(4.)—MARYON PARK BOARD SCHOOL, S.E.  
Trunk and arm movements.

U of M



1100



(4.)—MARYON PARK BOARD SCHOOL, S. E.  
Trunk and arm movements.

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from intellectual studies, and from the cramped positions assumed in the schoolroom are kept in view. Consequently the exercises may be considered as remedial movements in many instances.

It must be clearly understood that the above-mentioned classification is also based on the assumption that a class under instruction consists of a large number of children, irrespective of their individual physique or variation in age and social position; hence the movements are adapted to suit the requirements of the average school child. Each exercise is selected for its intrinsic value in a physiological and hygienic sense, and nothing is introduced for the mere purpose of display and effect. There are no movements of a complicated nature in the system, and not one that cannot be taught to a class of children in a few minutes, providing the exercises are taught in their progressive order. Every movement has some definite object in view; therefore the system is a rational one.

The great scope of the system is to produce *general or all-round development*. Local exercises are very little used, and then only in connection with others which are calculated to produce general effect.

The exercises are arranged as follows:—

Arrangement of the Exercises.	
Commencing positions of the upper and lower limbs.	Plate 1.
Head movements.	
Arms raising and swinging.	
Arms bending and stretching.	Plate 2.
Trunk movements.	
Trunk and arm movements.	Plates 3 and 4.
Leg and hip movements.	
Leg, hip, and arm movements.	
Side lunging.	
Direct lunging.	Plate 5.
Side lunging with arm movements.	Plates 6 and 7.
Direct lunging with arm movements.	
Balance movements.	
Shoulder movements.	Plates 8 and 9.
Shoulder movements with direct lunging.	
Exercises when on the march.	
Marching in various formations, and figure marching.	

It will thus be seen that the exercises are arranged in a progressive form, the most simple movements leading up to others of a more advanced nature. By a careful perusal of the manual it is evident that the system is a graduated one. First, movements of a simple character are introduced, bringing into play some particular part of the body; after which follow movements affecting two or more parts of the body, and so on, until exercises will be found which bring into simultaneous action nearly every joint and articulation in the entire frame. The movements are arranged in the simplest manner, but a thorough knowledge of the system and its practical application can only be acquired by

instruction from a competent teacher, while the manual becomes a guide to those who are undergoing, or have completed, the course.

The following benefits are derived from adhering to such a progressive course;—

- (1) Each elementary movement, besides being beneficial in a physiological point of view, aids in the correct execution of those which follow; hence children, when learning the simpler movements, are laying the foundation for the performance of those more advanced. This is the fundamental principle on which the system is based.
- (2) A teacher, conversant with such a system, can teach it without constant reference to a text book.
- (3) The exercises, being grouped in a progressive order, obviate the necessity for tables of exercises, as the teachers can select movements suitable for their classes according to the circumstances under which the instruction is given, *e.g.*, time of day, weather, indoors in a hall or corridor, in the open air, or under a shed.

Although devised for the physical training of school children, the exercises may with advantage be employed in the training of adults of either sex, as a preliminary to a more extended course with fixed gymnastic apparatus. The movements have been selected with a view to the physical benefit of school children under ordinary circumstances; nothing of an acrobatic character is introduced, or which will necessitate the children's hands or clothing coming in contact with the ground.

The exercises may be taught, without any alteration, in four different ways, so as to meet the views of those who are in favour of one method in preference to the others.

- (1) They may be taught as free movements by word of command, each movement having cautionary commands peculiar to itself; thus, by the modulation of the teacher's voice, the caution not only indicates the command which is to follow, but shows whether the movement is to be slow or quick, or rapid and energetic.
- (2) They can be performed by the elder children with dumb-bells if desired, whereby more physical benefit is derived than is the case when they are used as free movements.
- (3) The whole, with the exception of one or two preparatory ones, may be performed, with or without dumb-bells, to music, any simple air in common time being suitable.



(5.)—COBOURG ROAD TOAD SCHOOL, S.E.  
Direct hanging.



Многу

- (4) When two or more classes occupy the same room, one class may perform the exercises as a silent drill, without in any way interrupting the work of the others.

The system is equally suitable for the use of boys or girls whilst dressed in their ordinary clothing, and is readily acquired by the teachers under the same conditions. The whole of the movements were compiled under the personal supervision of eminent medical men (who have made physical culture a special study), and approved by them as a rational system of exercises suitable for the physical training of children.

Adoption  
System.

The Inspector of Military Gymnasia, after an exhaustive trial of the system in the children's schools of Aldershot for upwards of eight years, has approved of it in preference to all others; and on his recommendation it has been adopted in all army schools at home and abroad, by order of the Director-General of Military Education. The authorities of the following training colleges for teachers have exclusively adopted this system of physical training for their students, after experimenting with other systems during the past fifteen years:—Battersea, Borough Road, Bangor (both St. Mary's and Normal), Chelsea, Culham, Hammer-smith, and Westminster. The students are taught during residence in accordance with the manuals, and certificates are granted at the termination of the course to those who successfully pass the examinations. From the above training colleges upwards of 380 teachers are annually sent out capable of teaching a code of physical exercises suitable for school children of either sex. Many provincial School Boards have also adopted the system. Especially is this the case in Glasgow, where upwards of 700 male and female teachers, during the past year, qualified themselves to give instruction in the schools of that city. The British College of Physical Education have approved of the system, recommending it for the use of teachers, and have adopted the Theory Manual as their Text Book No. 1.

The exercises are preceded by a limited amount of military drill, which is used as an auxiliary to them. By it the children are taught how to assemble, to form classes, and to move from one point to another in an orderly and methodical manner. This drill, although based on that contained in the Infantry Drill Book, is slightly modified to meet the requirements of children, and nothing is taught which is not essential to the purpose. Many advantages accrue from the adoption in our schools of the national system of drill. The majority of teachers are acquainted with the elements of military drill through having belonged to the Volunteers whilst in residence at the training colleges, or having joined subsequently; consequently they have little to learn in order to teach that part of the subject to their pupils. With regard to the latter, many on leaving school join Boys' Brigades, Postal and Telegraph Service, and eventually the Auxiliary or Regular Forces. In such cases the drill previously learned is of

Military

great use to them, as they are not required to learn a new drill, or to forget what has been already acquired.

Instruction and  
examination  
teachers and  
students

To enable teachers to become conversant with the system, training centres are established, three being in North London and three in South London. The course of instruction consists of twenty-five weekly lessons, each of one hour's duration. Each teacher is required to attend not less than twenty-one times in order to become eligible for examination. During the course the whole of the exercises set forth in the Manual are taught. The greatest enthusiasm has been evinced by the teachers, as is shown by the fact that the classes are held in what may be called the teachers' own time—viz., from 6 to 7 p.m. Many teachers have attended course after course for their own physical benefit, and some have attended every year since the classes were organised in 1889. Lectures on the Theory of Physical Education are also given during the course, particular attention being paid to the following points:—Muscular movement; effects of exercise on the chest, lungs, heart, and circulation; air and ventilation; food and clothing; skin and its functions; games and swimming; effects of respiratory movements; spinal curvature; injurious positions assumed during school-life; and rules for conducting the lessons. During the course of instruction, the teachers under training are visited at their respective schools by the instructor, and are required to drill their classes in his presence. Should a teacher exhibit any weakness in conducting his class, employ a faulty method of instruction, or fail to maintain the discipline of the class, the instructor's duty is to call the teacher's attention to the errors, and further assist him by giving a typical lesson to the class. Such visits are repeated until the instructor can with confidence recommend the teacher for the practical examination.

At the termination of the course, examinations are held both in theory and practice, and certificates are awarded to those who satisfy the examiners. The practical part of the examination consists in each teacher personally performing the various movements, at the command of the instructor, and imparting instruction to a class of teachers or students, in presence of the examiner. In case of failure in the practical examination, a teacher is called upon to undergo a modified course of instruction during the next session, before being allowed to take that examination again. The theoretical examination lasts about 1½ hours, and consists in answering, on paper, about four questions bearing on physical culture in connection with the education of school children. In case of failure in this part of the examination, the teacher is allowed to sit for the subject on a future occasion. The examination in practice is quite distinct from that in theory, and is held by a different examiner, and on different days. Marks are awarded for theory and practice independently, and certificates are only granted to those who pass in both. Should a candidate pass in one part of the subject only, success in that part is acknowledged, but the certificate is withheld until a pass is obtained in the other part. Recently the Board have resolved that the instruction in theory shall be continued at the training





(6.) ST. MARK'S TRAINING COLLEGE, CHURCH.

1701

classes, but, instead of a theoretical examination as heretofore, every teacher must possess advanced certificates for physiology and hygiene before a certificate of competency to teach physical exercises is granted. This innovation has proved unpopular with the teachers, and it is extremely doubtful whether it will be an improvement on the old method, particularly as the teachers are allowed to teach physical exercises until they obtain the requisite science certificates, a matter which may be deferred for years in some instances.

The students in residence at the Training Colleges, after undergoing the course of instruction identical with that given at the Board's classes, are examined both in theory and practice, and certificates are granted to those who successfully pass the examinations. These certificates are acknowledged by the Board as evidence that the holders have undergone a course of instruction in physical exercises; but, in order to obtain the Board's certificate, they must undergo an examination as above described, attendance at the training classes being optional.

The certificates granted to school teachers on examination by the British College of Physical Education are recognised by the Board, the possessors being exempt from further training or examination.

The above particulars relative to instruction and examination apply both to male and female teachers and students.

In the schools under the Board, an average of one hour per week is the time devoted to the subject, consisting of about five minutes during both morning and afternoon session, and a weekly set lesson of about twenty minutes' duration. The teachers are responsible for the physical training of their own classes. The children are taught while dressed in their ordinary clothing—overcoats, cloaks, satchels, etc., being removed before the formation of the class.

Physical  
Instruction in  
Day Schools.

In a number of schools the children are frequently drilled *en masse* for a few minutes, exercises of a simple character being selected in order that the youngest scholars may participate in them. Periodically the instructor visits the schools in order to see that the various classes are taught efficiently, and at the time set apart for the subject on the time-table, and to render assistance where necessary. With regard to the efficiency of the work, much depends on the facilities afforded. The schools having central halls or large playgrounds are, as a rule, far in advance of those with no in-door accommodation or with playgrounds of limited extent. There are a few schools, however, possessing but few facilities, which produce excellent results, thereby proving that a great deal depends on the earnestness evinced by the teachers in the subject.

In order that physical exercises should be beneficial in the highest degree, it must be borne in mind that *frequency*, and not *duration*, of the instruction should be the prevailing feature in the physical education of children. In accordance with this view, a lesson of not less than fifteen minutes' duration should be given during each session. These lessons should be known



as *practising* lessons, when exercises and drill with which the children are familiar should be practised. In addition, a weekly lesson should also be given, occupying at least twenty minutes. During this lesson the teacher should rectify the errors observed in the practising lessons, introduce fresh movements where necessary, and explain to the pupils in simple language the benefits derived from the exercises which they may perform. It may be urged that this scheme is impracticable, but in my opinion it could be adopted in all schools, where facilities exist, without detriment to the other subjects in the school curriculum. The increased earnestness with which the scholars would resume their intellectual studies, after such periods of mental relaxation, would prove an ample compensation for the time thus expended. If physical education is worthy of serious attention, surely adequate time should be allotted to it, otherwise it becomes a mere burlesque on what is intended, and but few benefits are the ultimate result.

In every school where ample playground space exists, a great speciality is made of the methodical assembly of the scholars. The children are marched from the class-rooms and formed up in recognised positions. The chief object in view is the prevention of panic in case of emergency, though many other advantages accrue from this practice. It is extremely valuable as a means of maintaining discipline; obedience and promptness are secured; the tendency to roughness and noise is counteracted; while such an assembly, if followed by a drill lesson, effects a considerable saving of time. In the majority of schools the assembly is also observed before each session, either in the play-ground or in the hall. This is found to be a great stimulus to punctuality, but a lesson in physical exercises is not then given, as, among other reasons, a sufficient interval has not elapsed since the children's meals, or active participation in various games.

A typical lesson in physical exercises is conducted somewhat as follows:—Exercises of the most simple kind are first performed, being gradually followed by others of a more advanced nature, and which require more energy in their execution. Marching is now introduced: after which, as the lesson draws to a close, each succeeding exercise is of a milder form than the preceding one.

*Tables of exercises* supposed to be suitable for certain classes, no matter how scientifically arranged, should never be countenanced in the physical training of school children, as such a method tends to make the physical lesson a monotonous task to be repeated day after day, until both teachers and pupils are wearied by the sameness of the subject. In an elementary school there will be found children who are well clothed and fed, and others who are badly clothed and ill fed; consequently the physique of the scholars will vary considerably. It is thus obvious that a tabulated syllabus of instruction is not equally applicable to each pupil, as the stronger and more robust ones will not receive adequate training, should the syllabus be suitable to the weaker ones; while, on



(7.)—BELLENDEN ROAD BOARD SCHOOL, S. E.  
Side lunging with arm movements.

8700



the other hand, if the syllabus be suitable to the stronger children, the exercises would prove injurious to the less robust. A teacher who is thoroughly conversant with the system adopted can obviate the danger above mentioned by carefully selecting and combining the different exercises which, by their frequent variation, will produce the desired effect. Where set tables of exercises are countenanced, a better display is frequently produced than is the case where such tables are not in use, owing to the constant repetition of the same movements; but such mere proficiency is not indicative of beneficial results, and cannot be regarded as the primary object of physical education.

In order to secure uniformity in teaching, each teacher is supplied with a synopsis of the cautions and words of command used in the whole of the exercises taught at the training classes. Copies of the Manuals (theory and practice) are kept in each school for reference, the synopses being used simply as aids to memory.

For many years past attempts have been made to make physical exercises and practical gymnastics attractive items in the curriculum of the Evening Continuation Schools; but owing chiefly to the want of proper appliances, and the need of qualified instructors, it cannot be said that the undertaking was successful. An attempt is now being made to remedy the defects above alluded to, and during the coming session a competent instructor will be found at each school where such instruction is to be given, and all appliances in the shape of movable and fixed apparatus will be provided. Thus, with efficient organisation and proper supervision, points hitherto entirely overlooked, physical training should now prove a great success.

Physical Instruction in Evening, Industrial, and Truant Schools.

In the Board's Industrial School at Brentwood and also on board the Training Ship "Shaftesbury," the physical education of the boys is carefully carried out. At these two institutions the boys are systematically trained in free movements, followed by the use of movable apparatus, and, in the last mentioned school, practical gymnastics on fixed apparatus are added. In the case of the "Shaftesbury," the lesson in physical exercises, conducted *en masse*, and accompanied by the band, is a very interesting sight, embodying perfect discipline, energy, and precision, points most essential in the training of the boys, many of whom subsequently enter the naval, military, or mercantile service. Thus, in addition to the mental training which these boys receive, their physical training prepares them for any arduous calling for which a sound healthy body is essential. In the Truant Schools physical exercises are systematically taught, but confined to free movements.

With a view to encouraging military drill, the Board had for several years prior to 1889 organised public competitions amongst Board and voluntary schools, a banner, presented by the Society of Arts, being awarded to the school gaining the highest number of marks. As an impetus to physical education, physical exercises were, in that year, included in the competitions,

Competitions and Displays.

which were tolerably popular with the teachers. In course of time the number of entries gradually diminished, until at last it became a difficult matter to obtain sufficient entries. Ultimately, in 1895, the competitions were abolished, and in 1896 displays were substituted. The awarding of banners to the competing schools was productive of much dissatisfaction among the teachers, as the competing schools varied greatly as to the class of children, and facilities as to in-door and out-door accommodation for the necessary practice. The substitution of displays has, after two trials, proved more satisfactory than the old competitive method; but it is a matter of opinion as to the utility of either competitions or displays in furthering physical education in its proper sense. The erroneous idea, which prevailed among teachers some years ago, that physical exercises were chiefly introduced to be performed by a few select scholars in order to enhance the picturesqueness and attractiveness of school exhibitions and displays, has been dispelled, and the real object, viz., the physical welfare of every scholar, is now thoroughly recognised.

able  
aratus—  
dumb-bells, etc.

When a certain standard of proficiency is attained in the performance of free movements, light movable apparatus should be introduced for the use of the children, particularly the elder ones, in order to bring the muscular sense—*resistance to effort*—prominently into action. By the use of dumb-bells or wands in the training of children, more physical benefit will be obtained, owing to the increased effort required to perform the movements. The various exercises may be modified, at the discretion of the teacher, by apportioning the weight according to the strength of each child, who will thus derive the maximum benefit with the minimum of physical labour. Muscular contraction is directly proportionate to the amount of resistance offered, consequently the greater the resistance the greater will be the amount of muscular effort involved. Free movements are quite sufficient for the physical education of very young or delicate children, but are of little value in the physical training of children who have attained the age of twelve or thirteen years. Therefore, free movements should be regarded as *preparatory* to exercises of a more advanced nature, which are subsequently to be performed with the aid of movable apparatus. All free movements should be executed with this object in view.

In response to my repeated suggestions as to the necessity for the use of light movable apparatus, the Board agreed during the past year to supply light wooden dumb-bells and wands for the use of the elder children of the senior departments. No school is recommended for a supply of such apparatus unless it is certified by the instructor that the free movements are thoroughly taught, and that such progress is made by the elder scholars as will warrant its use. A great number of schools, both boys' and girls', has received supplies of dumb-bells and wands on the request of the head teacher—a clear indication that the teachers have recognised the fact that free movements alone are insufficient





(8.)—BELLENDEN ROAD BOARD SCHOOL, S.E.  
Shoulder movements.



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for the physical training of their elder scholars. In addition to the above mentioned apparatus, several boys' and girls' schools have received supplies of clubs and skipping-ropes; but these have only been granted on the special recommendation of the instructor, and chiefly for display purposes. After a year's trial, however, the Board have resolved to discontinue the issue of clubs as being unsuitable for the use of the children, and have agreed to supply only dumb-bells, wands, and skipping-ropes in future, as being the most suitable form of apparatus for use in elementary schools. Clubs are outside the scope of elementary school work, chiefly on account of the space required for their manipulation by large classes, and the amount of time necessary for instruction in a form of exercise which is a total departure from all previous work. Free movements can be easily supplemented by the use of dumb-bells and wands; but the movements required in club-swinging are of such a nature as to render it impossible, in the case of children, to lead up to them by any previous training. The dumb-bells supplied to the schools vary in weight from 10 to 12 ozs. for girls, and from 12 to 14 ozs. for boys, and are made of hard wood, not only to ensure strength and durability but also to lessen the bulk. The ends are rounded, and the length ranges from  $6\frac{1}{2}$  to 7 inches; the handles are from  $3\frac{1}{2}$  to  $3\frac{3}{4}$  inches in length, and bulge from  $\frac{3}{4}$  of an inch to 1 inch in the centre, so as to fit into the hollow of the hand. The wands are also constructed of hard wood, and vary in length from 30 inches to 38 inches, and from  $\frac{3}{4}$  of an inch to 1 inch in diameter, the weight ranging from 1 lb. to  $1\frac{1}{2}$  lbs.

The great barrier to the harmonious co-operation of physical instructors, at home and abroad, is the difference of opinion as to the employment of music in the performance of physical exercises—some instructors being in favour of its utter exclusion, while others advocate its use on all occasions. After years of practical experience of both methods, my opinion is that the best course lies between the two extremes. The employment of music with free movements, or with exercises performed with the aid of dumb-bells, wands, etc., is highly desirable, particularly in the case of children, but great care must be exercised in its application. As soon as a series of movements can be readily performed without further instruction, it will be found advantageous to perform them periodically to musical accompaniment. If this is not done, there is a probability of the interest in the work declining, and if this occur the best results will not be obtained. Children cannot be expected to entertain such a high opinion of the work as the teacher cherishes; and, after a time, are inclined to regard the regular performance of physical exercises without music as irksome, no matter how often they may be reminded of the benefits they derive from them, and this through no fault of the teacher. The employment of music secures a more interested, and consequently a more satisfactory, execution of the work, while the beneficial effects of the exercises are in no way diminished

Music applied  
to Physical  
Exercises.

In the teaching of physical exercises in the schools, with a view to the subsequent employment of music, four distinct stages are observed :—

- (1) Each series of movements is taught by word of command, so that any faults can be at once corrected. The attention of the pupils is devoted to the performance of the exercises with precision as regards position, form, and rhythm ; and the fact that each movement requires a separate and distinct order secures perfect attention.
- (2) When improvement in the performance of the exercises indicates that mind and muscle are co-ordinated, numbers are substituted for the words of command, as far as practicable.
- (3) When the exercises become still more familiar to the pupils — automatic in fact — they are performed judging the time, or better still, the pupils are allowed to count the time audibly.
- (4) When the movements are so engrafted on the pupils that they perform them almost mechanically, and there is an indication that the exercises have become monotonous and uninteresting, music is introduced. A fresh stimulus is thereby given, and greater interest, smartness, and finish are the ultimate results. The exercises have now reached their recreative stage, and what was before deemed almost a drudgery now becomes a pleasure.

Fixed Gymnas-  
tic Apparatus.

Gymnastic apparatus (horizontal and parallel bars) was supplied to the schools many years ago, and was erected in the asphalted playgrounds. Owing to the unsuitable construction of these appliances, the want of proper instruction and supervision, and the absence of any precautionary measures to ensure safety, many serious, and in some cases fatal, accidents occurred, consequently a large proportion of such apparatus was subsequently removed. No fixed apparatus should be erected in any school unless it has been previously found that some member of the staff is thoroughly qualified to impart instruction in its use. The growing frames of young children require the most careful treatment, therefore it must be borne in mind that mere ability to perform a few gymnastic exercises is not sufficient guarantee that a person may be entrusted with the instruction of children in the use of fixed apparatus. I firmly believe that a few simple pieces of apparatus, such as a low horizontal bar, a low set of parallel bars, a couple of climbing-ropes, and an inclined ladder, would be of great utility in the physical training of the elder scholars. The two last-mentioned appliances are highly essential in the training both of boys and girls. The ability to ascend or descend a rope, or the underside of an inclined ladder, may be the means of saving life, particularly in the case of fire or immersion in the water. Such apparatus should only be supplied to schools with *halls*, should be portable, simple in construction, and of such





(3.)—MCNEYWELL ROAD BOARD SCHOOL, S.W.  
Shoulder movements.

8400

dimensions as to be suitable for the use of children only. The horizontal and parallel bars should only be used by the most robust among the elder children, and no practice on any apparatus should be permitted unless under the personal supervision of a thoroughly competent instructor. Recently apparatus of the above description has been granted to a few schools, and in accordance with the foregoing suggestions.

The horizontal bars are supplied for use in the school halls. Each bar is made of ash, is 6 feet in length,  $1\frac{3}{4}$  inches in diameter, with  $\frac{3}{4}$  inch steel core, and is supported by four pitch-pine uprights resting on floor plates. It can be raised to an extreme height of  $6\frac{1}{2}$  feet, and can be lowered to  $3\frac{1}{2}$  feet by spreading the supports, the whole being securely fixed by two wire guys only. The parallel bars are portable but not adjustable. They are also made of ash, have pitch-pine supports, and are  $5\frac{1}{2}$  feet in length,  $3\frac{1}{2}$  feet in height, and  $1\frac{3}{4}$  inches in diameter, but without a steel core, the width between the bars being  $16\frac{1}{2}$  inches. Coconut-fibre mats, 6 feet square, are also supplied for use with the above mentioned apparatus.

A keen interest has been shown for many years by a great number of teachers in promoting recreative games and sports among their scholars. Time has been ungrudgingly given and expense incurred in the furtherance of these objects. Football, cricket, and athletic sports have received the greatest attention. From small beginnings, football associations have been formed dating back to 1886, culminating in the formation of the London Schools Football Association in 1893. At the present time there are no less than twelve branches of this association, embracing practically the whole School Board area of London. This example was followed by many provincial schools, notably those of Sheffield and Manchester, and with these friendly matches are annually played. Public interest in the matter is very great, and is exemplified by the fact that the funds of the Teachers' Orphanages were recently benefited to the extent of £100—the proceeds of matches played in London by teams of boys representing Sheffield and South Metropolitan elementary schools.

Games and  
Sports.

In 1891 the South London Schools Cricket Association, probably the largest school association for cricket in the kingdom, was formed, with a view to controlling and systematising the school games hitherto played under no organised plan: providing the scholars, particularly the elder ones, with sound and health-giving open-air exercise: securing ground on the various open spaces for playing school matches: and arranging for properly played and more skilful games.

For the encouragement of football and cricket, trophies are given for annual competition among the various branches of the associations. To the South London Schools Cricket Association belongs the honour of establishing, in 1891, the Annual Athletic Festival, the chief object of which is to awaken public interest both in the work of physical education in the schools and in the voluntary efforts of the teachers in organising out-door sports.



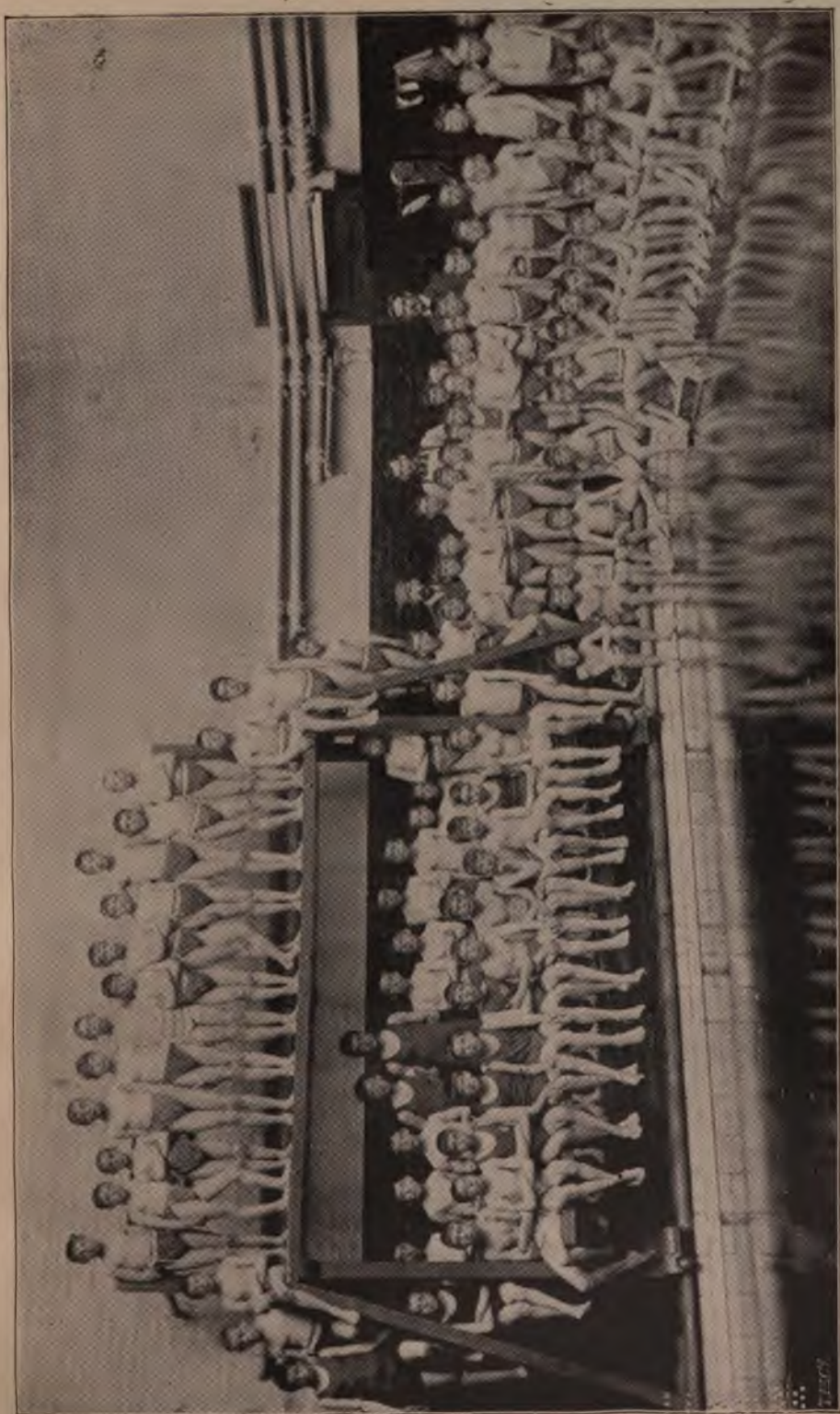
On Whit-Monday, 1892, the first meeting of the United Associations was held at the Herne Hill Athletic Grounds, when 500 competitors, representing about 30 schools, participated in the various contests. Since that year, this annual meeting has developed in every way, and at the last meeting, 1897, over 2,000 children competed, representing over 70 Board and Voluntary Schools. The sports consisted of football and cricket contests, flat and obstacle races, jumping, tug of war, bicycle races, and exhibitions of physical exercises and musical drill. About 7,000 persons attended the festival, and the total receipts reached £100. Prizes are annually awarded, their value being on the last occasion nearly £70. The continuity of the work is shown in the formation of Old Boys' clubs, by means of which touch is maintained with the ex-scholars, resulting in increased enthusiasm being shown on the part of the younger children, whereby a healthy spirit of emulation is fostered.

Swimming has been taught in numerous schools of the Board for many years, but no attempt was made till 1880 to establish an association for its promotion. This scheme did not meet with much support, and by 1883 it had almost ceased to exist. In that year, however, an effort was made to revive the old scheme, resulting in the establishment of the London Schools Swimming Association, the object of which is to promote and encourage, in every possible way, the art of swimming among the scholars of the Elementary Schools of the metropolis. All Elementary Schools within the London postal area are eligible to affiliate with the association. The affiliated schools now number 392, and comprise 26 branches, each having its duly elected officials. A great impetus to the systematic teaching of swimming has recently been given by the introduction of this subject as a part of the school curriculum. Many prominent individuals and public bodies have materially aided the work of the association by pecuniary assistance, and the presentation of trophies for open competition.

When swimming is taught during school hours, the fact is notified on the time-table, and the scholars are taken to the various baths at the specified times. Free admission to the baths is obtained by means of vouchers supplied by the Board, and each scholar receives 30 lessons free of charge. The instruction is given by the teachers in a methodical manner, chiefly by introducing preliminary swimming drill (which may be found in the Manual) prior to entering the water.

With regard to the teachers' qualifications, it may be stated that about 120 of them hold Certificates of proficiency, granted after examination by competent examiners, while upwards of 400 others are qualified in some degree. The certificates are granted to all teachers who fulfil the following conditions:—

- (a) Dive (for ladies, optional).
- (b) Swim 100 yards (ladies 50 yards), part of which shall be done on the back.



Amoy



- (c) Satisfy judges of power to teach swimming. Candidates will be expected to answer questions on the theory and methods of teaching, and to criticise faulty swimming.
- (d) Satisfy judges of power to teach life-saving. Candidates must be able to effectively rescue by any two of the four methods, and must know thoroughly the resuscitation drill (Sylvester method)

It will be seen from these particulars that every effort is made to secure competence on the part of those to whom the instruction of the children is entrusted.

The success attending the teaching of swimming is increasing year by year, as is proved by the following statistics: Up to 1894 the number of children who had been taught to swim was about 7,000; in 1895 the number had increased to 10,000; while in 1896 the total had reached 12,000.

The efficiency of the children is tested by examiners appointed by the association, and certificates are granted to each boy or girl who can swim 100 yards or 50 yards respectively. The London School Board also award Certificates to scholars who are certified by the Head Teacher and the Teacher of Swimming as being able to swim 40 yards in the case of boys, and 20 yards in the case of girls. Under the auspices of the Life Saving Society instruction is given to the children in life saving and the resuscitation of the apparently drowned. The London Schools Swimming Association is affiliated to the Southern Counties Amateur Swimming Association, and also to the Life Saving Society. All race meetings and competitions are conducted under Amateur Swimming Association laws.

A roll of honour—a record of teachers and scholars who have been instrumental in saving life—has been established, and on it are enrolled the names of those whose efforts to save life have been recognised by the Royal Humane Society. Already eleven names appear on this roll, nine being those of scholars and two of teachers.

The foregoing is a brief account of what has been done to promote Physical Education in the Board Schools of London. Although much has been accomplished, and good results are evident on the whole, yet much more remains to be done before the Board Schools of London can take a leading position among those of this country in the important matter of physical culture.

THOS. CHESTERTON,  
*Organising Teacher of Physical Education,  
School Board for London.*

The Manuals (theoretical and practical) mentioned in this paper are published by Gale and Polden, Limited, 2, Amen Corner, Paternoster Row, E.C.

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### Physical Education in the Girls' and Infants' Departments in the Schools of the London School Board.

The girls attending the London Board Schools are physically trained according to the Swedish system. This system was first introduced into the schools of the Board in 1879 by Miss Löfving, who, at the invitation of the London School Board, came from Sweden to give a course of instruction to some of the Mistresses.

From the small beginning made by Miss Löfving the work has gradually spread, until to-day, I am happy to say, there is scarcely a child attending our schools who is not receiving systematic physical training, and few teachers—except those recently appointed—who are not qualified to impart the instruction. When I state that during my term of office—10 years—I have trained over 2,500 teachers, it will be readily understood to what an extent the work has grown.

The instruction is commenced in the Infant Schools. All the children from the "Babies" to Standard I. are taught some exercises. These consist chiefly of commencing positions and elementary movements—a few of which are shown in the first five illustrations—and are mostly imitative in the case of the younger children, but executed from the Teacher's command by the older ones. Much time is spent in Marching. Sometimes the exercises are executed to Musical accompaniment—this is not recommended unless the movements are first correctly performed.

In the Girls' schools the work is graded from Standard I. to Standard VII.

In Standards I. and II. the elementary movements taught in the Infant schools are repeated and a few others added. Their work thus consists of simple feet and leg movements, trunk movements executed from the fundamental or simple positions (as shown in Fig. 6 but not taken with the feet closed), simple arm stretchings in any of the following directions:—upwards, sideways, forwards, backwards; easy balance movements such as heel raising, and heel raising and knee bending (Fig. 7), simple arm swinging upward and backward, leaping in the height and with turnings. The Marching exercises consist of simple marching, marching sounding certain steps with the object of bringing in a knee practice, tip-toe marching and running. Figures 1 to 9 illustrate a few of such exercises.

Standards III. and IV. repeat the same work, but progression is made in the following way:—The foot placings are rendered more difficult by combining them with heel raising, and heel raising and knee bending (Fig. 10). The trunk movements are taken from more difficult positions, as shown in Figures 11, 12 and 14.

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The illustrations will be found at the end of the paper.



The arm exercises are combined with foot movements; take for example the commencing position of Fig. 12, or if the arms are stretched in different directions, *e.g.*, right arm upward, left arm sideways; or right arm upward, left arm forward. More complicated balance movements are taken, as width jumping and arm and knee movements combined. The shoulderblade movements are increased in number, and rendered more difficult by being combined with feet movements; the leaping also increases in difficulty by being taken in conjunction with arm and leg thrusting. Leaps are also taken forward and to the left and right—lunging as shown in Fig. 16, but without the arm movement, is introduced. To the simple marching is added a company march from ones to eights, and *vice versa*—this march introduces wheeling. A fancy step, not unlike a polka, is also taken, which tends to make the children light and graceful in carriage.

In Standards V., VI., and VII., which are frequently taught as one class, all the preceding work is taken; lunging in all directions and combined with arm movements (Fig. 16) is also taught. The trunk movements are practised from more difficult postures, as seen in Figures 15 and 17, and are also taken with natural supports, as in Figs. 18 and 19.

Arm stretchings are executed with greater force and energy—more complex balance movements are added, as alternate knee bending upwards (Fig. 13), and such movements as shown in Fig. 20. Leaps are taken with a given number of running steps as a start, and also over a rope. High jumping is not encouraged, attention being chiefly paid to the correct method of executing the leap.

Figure marching is taken, which tends to teach the children to be exact in their movements.

This progressive order of instruction is arranged in a series of 14 tables—two tables for children below Standard I, and two for every class above, but each table requires to be divided and subdivided by the teacher for purposes of instruction.

Every table is arranged in a given order, which provides movement for each part of the body.

I. (1).—Introductory exercises, which consist chiefly of leg and balance movements. These correct the general position, and serve to gain the attention and steadiness of the class. Such exercises also stimulate the general circulation, and draw the blood in large quantities to the lower extremities, thus relieving the brain and abdominal organs, in which parts the blood becomes more or less congested during the period the children are kept sitting.

These are followed by II. (a).—Neck movements, which serve to correct the position of the head. In physical training this is of great importance, as a drooping head generally indicates a relaxed state of the shoulderblade muscles, and a flattened chest. II. (b).—Arch flexions. These embrace trunk bending forward, backward, and forward and downward (Fig. 14). In addition to expanding the chest, they strengthen the muscles on both sides



of the vertebral column. These exercises are of great importance, as owing to the many bad postures children are apt to assume during school life, there is a tendency on the part of the spine to develop irregularly.

The third group of exercises consists of arm-bending and stretching. These develop the muscles of the arms, and also assist in developing the chest, as they induce deeper and more rapid respiration, especially when combined with leg movements.

Group 4 are the balance movements. These produce a co-ordination of muscular contraction in all parts of the body.

Group 5 are the shoulderblade movements, which assist, with Group 2, in strengthening the muscles of the back, and also correct the position of the shoulders, which, as a rule, in children are very prominent.

Groups 6 and 7 consist of abdominal and lateral trunk movements. These strengthen the abdominal and side trunk muscles, and by means of the alternate increase and decrease of pressure on the internal organs digestion is stimulated.

Group 8 is formed of marching, running, and leaping exercises. These bring about a compound action of all parts of the body; they develop elasticity and quickness of thought and action.

Respiratory exercises form the last group of the lesson. They consist of slow arm and leg movements, taken in conjunction with breathing, and have the effect of not only developing the chest but also regulating the beat of the heart, which becomes more or less accelerated after such exercises as running and leaping.

The lesson is thus finished by exercises that have a calming effect upon the children before they return to their studies.

With slight deviations this syllabus of work is taught in every school possessing a central hall, but I regret to say in the majority of the old schools such accommodation is not provided. In these schools instruction is given in the playground when the weather is favourable, but the greater part of the year\* it has to be given in the class-rooms. This is managed by ranging the children in lines between the rows of dual desks. As this space is generally less than two feet wide it will be seen that the number of exercises that can be practised is limited, and no marching can be taken. This is a great drawback, as marching greatly improves the carriage of the girls. Leaping has to be almost discontinued because of the damage to ceilings below, and lunging cannot be taken for want of space. Thus, in such schools the work is seldom more advanced than that of Standards III. and IV.

It would be quite impossible in so short an article to give lists of the actual exercises executed. As a guide, however, and to show the graduated progression of the training, I am giving a set of photographs. With two exceptions they are photographs of children attending the Sherbrooke Road, Fulham, Girls' School, and were taken in the playground. The physical training in this school is very thorough, and the illustrations are of children who have received at least three or four years' instruction.

It will be noticed that all the exercises are executed without

the aid of apparatus. This is one of the many advantages of the Swedish system. The whole series of free movements, which in themselves form a perfect physical training, can be graduated from the gentlest, suitable to the young and delicate child, to those which require much muscular energy, and are difficult even to the strongest.

I should like to call attention to the position of the children in the illustrations. A good posture is of great importance, and is a point specially impressed upon the teachers during their course of instruction.

For seven years we had annually a very interesting drill competition at the Royal Albert Hall. Six of the best schools were selected to each send a company, and to the best one a challenge banner was awarded. At these competitions the very perfection of movement has been shown. For the last two years a display has taken the place of the competition, and in addition to Swedish drill my colleagues and I have introduced musical drills—*e.g.*, skipping, wand, scarf, hoop, and ball drills. This, however, does not form part of the ordinary school work, but is specially prepared for the occasion.

The skipping has always been much appreciated. If taken in moderation it is a splendid exercise for girls and develops greatly the capacity of the lungs; it also provides amusement as well as healthy exercise during recreation time, therefore I encourage it whenever possible. Educationally I find these displays of great value. They give the many hundreds of teachers who witness them an opportunity of seeing perfect work, which forms an admirable standard for them to work to.

Fire drill is practised in a few of the schools. I trust that in time it will be compulsory in all, because I consider it a most important part of school discipline, particularly if one contemplates what is likely to take place in a large school should a panic occur.

Only a few general rules can be given for fire drill, as the mode of dismissal depends upon the structure of the building. The plan I take is (*a*) perfect attention to the class teacher when the fire whistle is unexpectedly heard. (*b*) Order given by teacher to stand, file out, and march. (*c*) The class nearest the staircase file out first, rapidly forming two, three, or four abreast—according to the width of the staircase—as they march down; the other classes follow on room after room in a specified order. (*d*) Each class marches to a given place in a remote corner of the playground to await further orders. In this way I have seen a large infant school—494 present—cleared in 1½ minutes. There was no staircase, but all had to pass through a central hall before reaching the playground.

During the summer months swimming forms an important part of the physical training. It was taught during the bathing season of 1896 in 88 girls' schools. The upper standards generally receive the instruction which is given in the public swimming bath nearest the school.

The time devoted to physical training varies; in some schools

10 minutes is given every day for exercising, with an additional 20 to 30 minutes' lesson per week for teaching purposes—in others, two lessons per week of about 20 to 30 minutes' duration are given. On an average 1 to 1½ hours per week is the time devoted to the subject.

It would afford me much pleasure to give any reader of this article interested in the subject and desirous of seeing the drill of the schools an opportunity of witnessing some of the actual work done.

C. M. ELY-DALLAS.

*[It is my melancholy duty to record here the death, in September 1898, of the writer of this paper. Her untimely loss is deeply regretted by her colleagues and by all interested in the development of Physical Education in our public elementary schools. Ed.]*

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FIG. 1.—FUNDAMENTAL POSITION.



FIG. 2.—PREPARATORY MOVEMENT.  
Arms upward bend; preparatory to arm circling.



FIG. 3.—ARM EXTENSION.  
Arm stretching upwards.

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FIG. 4.—PREPARATORY MOVEMENT.  
Neck rest, preparatory shoulder blade exercise, also good position for the movement being executed, viz., heel raising.



FIG. 5.—SHOULDER-BLADE EXERCISE.  
Arm bending forwards, preparatory movement to arm extension sideways



FIG. 6.—TRUNK MOVEMENT.  
Simple trunk bending backwards, executed with hands at "neck rest" and "feet close."



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FIG. 7.—BALANCE MOVEMENT.

Double heel raising and knee bending, executed with legs straight.



FIG. 8.—TRUNK MOVEMENT.

Trunk turning with hands at "neck rest" and foot placed forward.



FIG. 9.—TRUNK MOVEMENT.

Trunk bending backwards in kneeling position, hands at "neck rest."

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FIG. 10.—LEG AND BALANCE MOVEMENT.  
Double heel raising and knee bending, with alternate  
foot placed outwards; hands as "lips firm."



FIG. 11.—TRUNK AND SHOULDER-BLADE  
EXERCISE.  
Trunk bending forwards, taken with feet placed  
sideways and arms bent forwards.



FIG. 12.—TRUNK MOVEMENT.  
Trunk bending backwards, with left foot placed  
forwards and arms stretched upwards.

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FIG. 13.—BALANCE MOVEMENT.  
Alternate knee bending upwards; hands at  
“hips firm.”



FIG. 14.—TRUNK MOVEMENT.  
Trunk bending forward and downward, taken with  
feet placed sideways and arms stretched upwards.



FIG. 15.—TRUNK MOVEMENT.  
Trunk bending backwards in half-kneeling  
position.



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FIG. 16.—COMBINED LEG AND ARM MOVEMENT.

Diagonal lunges with alternate arm stretched upwards.



FIG. 17.—LATERAL TRUNK MOVEMENT.

Trunk bending sideways, with feet sideways and arms stretched upwards.



FIG. 18.—COMBINED TRUNK AND LEG MOVEMENT.

Trunk backward bend with elbow support; heel raising and sinking.

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FIG. 19.—ABDOMINAL MOVEMENT.  
Trunk bending backwards, with foot support.



FIG. 20.—LEG AND BALANCE MOVEMENT.  
Forward spring on front foot, rear foot supported.

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## Physical Training of the Scholars in Birmingham Board Schools.

By SAMUEL BOTT,

*Superintendent Teacher of Physical Exercises.*

With an Appendix on the Physical Training of Pupil-Teachers  
in the Birmingham Board Schools.

In the Birmingham Board Schools there is now a complete system of physical exercises, embracing free body movements, dumb-bell, stave, and Indian club exercises. The system has been a matter of gradual growth and development. Fifteen years ago a few elementary evolutions with the arms were gone through, the object of which was to arouse flagging attention to the lesson in hand rather than to develop physique. Physical exercises, *per se*, formed no part of the school curriculum, and this was felt by many teachers and educationists to be an omission which should, at all costs, be supplied. Accordingly, Physical Exercises were introduced into the Time-Table of all the schools. It was found necessary at first to lengthen the school hours in order to provide the requisite time to be devoted to the new subject, but the Board has lately reverted to the original school hours.

In 1886, the Board adopted the following scheme for physical exercises:—

1. As a rule, fifteen minutes on four days of the week shall be devoted to physical exercises at the commencement of the afternoon session, and forty minutes on one day, so that the time during the whole week amounts to one hour and forty minutes.
2. In no case must it take the place of the run between the lessons, and the teachers must understand that it is quite distinct from recreation.
3. As a rule, not more than sixty scholars should be drilled by one teacher only, but where it is convenient to drill a larger number together, other teachers should be present in the proportion of one to every sixty scholars. *pupils*
4. The exercises shall chiefly consist of:—Formations; Marching; Running; the Maze; Free, Dumb-bell and Stave exercises.
5. The more proficient scholars should be allowed to use the gymnastic appliances during the drill, so that a stimulus may be given to individual excellence.



6. The exertion required for these exercises should never be severe or prolonged, and the head teacher should make it his duty to see that no child takes part in them who might be in any way injured by the practice.
7. The instruction of the Teachers, the regulation of the exercises, and the supervision of the work should be undertaken by a special teacher thoroughly versed both in the practice and the theory of the subject.

Immediately on the adoption of the foregoing scheme, I was appointed Superintendent Teacher of Physical Exercises. Briefly stated, my duties have been to train the teachers; to visit the schools, and assist the newly-appointed teachers to gain proficiency by giving specimen lessons to their classes; to help the teachers having charge of the upper classes in the yard exercises, and to correct any faulty teaching; to inspect each class in every school once a year for the purpose of seeing that the exercises have been properly taught; to report to the Board on the progress and efficiency of the physical exercises in their schools.

From the outset I recognised that, if the aim of the Board was to be achieved, the responsibility of the teaching must rest with the class teachers. With this end in view, evening classes for the teachers were organised. The whole course of exercises to be taken in the school was thoroughly explained and practised. A certificate of proficiency was granted to each teacher who, after passing through the classes, showed the ability to train his or her class in the specified exercises. Mere knowledge of the exercises is no criterion of ability to train a class of children in drill. Much depends upon the smartness with which the orders are given, the correct time when an order is given, the insistence on all commands being promptly and implicitly obeyed, and, in short, on a close attention to many small details the observance of which is absolutely necessary if excellence is to be attained. Of course, when physical exercises were introduced into the schools, the whole staff of teachers under the Board had to be trained. Classes are now held from September to Christmas and from January to April. It is a condition of employment under the Board that these classes shall be attended by newly-appointed teachers. There are fifteen lessons of one hour's duration in each term, and, as a rule, attendance during one term enables a teacher to master the exercises which he or she will be called upon to teach. About six months after the teachers have taken this course of practical lessons, I visit the schools in which they are engaged for the purpose of seeing them conduct a class in drill, and the certificate of proficiency is awarded in all cases where satisfactory work is shown. The yearly increases of salary up to the maximum are very largely automatic under the Birmingham Board. But one of the regulations states that the increase in salary may be withheld if the drill certificate be not obtained. It is difficult, perhaps, to gauge the absolute effect of

this stimulus, but I have never heard of a case where it has been necessary for the Board to proceed to the extremity of exercising the power they reserve to themselves.

The syllabus of exercises with which we started in 1886 is somewhat meagre when compared with the amount and variety of work which is to-day taught in our schools. From time to time exercises have been added, until now we have an organised set for each standard. But from the beginning the aim of the exercises has been to promote healthy physical development of the whole body and a high level of all-round physical efficiency. Indeed, the greatest importance is attached to the teaching of the elementary positions or postures, in order that the maximum hygienic value may accrue from the performance of the exercises.

The present syllabus of exercises may be summarised under the following heads:—

1. Marching and running.
2. Turnings.
3. Free body movements.
4. Dumb-bells, staves, and Indian clubs.

Marching is practised not only when the children go for their drill lesson in the playground, but whenever they move from place to place in the school. The aim is to get the children to walk in a natural manner, with a uniform length of step, at an even rate, at equal distances from each other, and always looking to the front. Marching with stiff legs, or going to the other extreme of raising the knees too high, stamping, or taking too short a step, are the chief faults to be guarded against. Of all the branches of physical exercises, marching is the most important in its effect on the discipline of a school. The old style of walking on the toes, in order that no noise should be made, was slow, unnatural, and almost invariably failed to produce the desired result, whereas the marching of a class of boys or girls with synchronous step and regular spacing gives an air of orderliness and discipline which arrests attention and commands admiration.

When the children can march steadily, running exercises are introduced, and "the run" in the yard on a cold day when the set drill has been gone through is fully appreciated. The scholars are taught changing step, turning to the right-about on the march, wheeling, forming pairs, fours, and eights; and the upper standards are taught figure-marching—i.e., forming squares, circles, crosses, spirals, &c.

The body movements have been arranged with a view to the harmonious development of the muscles of the body. They include forward, backward, and lateral movements of legs, arms, trunk, and head. They can be performed, as a rule, by children in their class-rooms. The playground or hall is not always available for the drill-lesson, and regard has been had to this fact in arranging the exercises. In all standards above the



second, apparatus is used for the drill-lesson. It has been found that a lesson with dumb-bells or staves excites more interest in the children than where no apparatus is used; movements are better performed, and the exercise itself is more conducive to bodily development. Thus a simple movement of the arms, for instance, involves very little action beyond that of the limbs themselves; if, however, a dumb-bell is held in each hand, the swing of the arms is more active, and the muscles of the trunk are called into play for the purpose of giving steadiness to the body.

The dumb-bells are made of dried beech, and weigh 10 ozs. each. The staves or wands are of light wood, about 4 feet long and  $\frac{1}{4}$  inch in diameter. The dumb-bell and staff exercises are carefully graduated, and range from simple arm movements to difficult combinations of arm and body movements. The Indian clubs are also of light wood, 22 inches long, and  $2\frac{1}{2}$  inches in diameter at the thick end. The exercises are graceful and useful, but more difficult to teach and to explain. In the free dumb-bell and staff exercises, each movement is entirely separate and distinct from the others, while in club exercises the movements follow on in an easy and graceful manner. A detailed and illustrated description of all the exercises taught in the Birmingham Board schools will be found in Macmillan's Text-book of Physical Exercises by Carter & Bott.

As stated in the scheme adopted by the Board, one lesson of forty minutes, and four short lessons of fifteen minutes' duration are, as a rule, taken every week with each class. The long lesson is taken at a suitable time, as set out in the school timetable. It is always taken in the yard or hall; and marching, wheeling, turns and formations, together with a set of exercises, are practised. Each class works to a syllabus. The following are the girls' and boys' tables of a year's drill and exercises for each standard in the playground.



TABLE OF A YEAR'S DRILL AND EXERCISES FOR EACH STANDARD  
IN THE PLAYGROUND.

BOYS.

Standard.	Marching.	General Drill.	Exercises.
VI. ....	(a) March at a uniform rate, at even distances, and with a good carriage. (b) Change step, and do the right-about turn on the march. (c) Counter-marching. (d) March in line backwards and forwards. (e) First simple figure march (f) Marching in fours. (g) Running.	(a) The turns. Right turn; left turn; half right turn; half left turn; right-about turn. (b) Dressing of lines. (c) Wheeling in fours forwards and backwards. (d) Opening and closing of ranks for exercises.	(a) Indian club exercises, or (b) Stave exercises, Nos. 1 to 9.
V. ....	Same as VI.	Same as VI.	Dumb-bell exercises, Nos. 3, 11, 14, 17, 19, and 20.
IV. ....	Parts (a), (b), (d), and (g), of VI.	Same as VI.	Dumb-bell exercises, Nos. 8, 10, 12, 13, 16, and 18.
III. ....	Parts (a) and (g) of Standard VI. Change step on the the march.	Same as VI.	Dumb-bell exercises, Nos. 1, 4, 5, 6, 7, 9, 12, 15.
II. ....	Part (a) of Standard VI.	Right, left, half right, and half left turns. March to position for exercises instead of wheeling.	Exercises for Monday, Tuesday, and Wednesday, of School Table. Forward and side lunges.
I. ....	March in step.	Right and left turns, as in marching. March to position for exercises.	Exercises for Monday and Tuesday of School Table.

In mixed schools the Table for Girls should be used.  
The Nos. refer to the exercises in the Text-Book.

TABLE OF A YEAR'S DRILL AND EXERCISES FOR EACH STANDARD  
IN THE PLAYGROUND.

## GIRLS.

Standard.	Marching.	General Drill.	Exercises.
VI. ....	(a) March at a uniform rate, at even distances, and with a good carriage. (b) Change step and do the right - about turn on the march. (c) Counter-marching ... (d) March in line forwards and backwards. (e) First figure march. (f) Marching in fours. (g) Running, parts (a & c) of above.	(a) Turns. Right turn; left turn; half right turn; half left turn; right-about turn. (b) Wheeling in fours, forwards and backwards. (c) Opening and closing of ranks for exercises.	(a) Indian club exercises, or (b) Stave exercises, *Nos. 2, 3, 7, 10, 11, 12, 13, and 14.
V. ....	Same as VI. ....	Same as VI. ....	Stave exercises Nos. 1, 2, 3, 4, 5, 6, 8, 9.
IV. ....	Parts (a), (b), (d), (g) of Standard VI.	Same as VI. ....	Dumb-bells, Nos. 2, 8, 10, 12, 16, 18.
III. ....	Parts (a) and (g) of Standard VI. Change step on the march	Same as VI. ....	Dumb-bells, Nos. 1, 4, 5, 6, 7, 9, 12, 15.
II. ....	Part (a) of Standard VI.	Right; left; half right and half left turns. March to position for exercises instead of wheeling, &c.	Exercises for Monday, Tuesday, and Wednesday of School Table. (See p. 7.)
I. ....	March in step	Right and left turns by Nos.	Exercises for Monday and Tuesday of School Table. (See p. 7.)

\* The Nos. refer to exercises in the Text-Book above mentioned.

The four short lessons are taken at the commencement of the afternoon session or at some convenient time between the lessons. The time is spent in marching, wheeling and turns, or practising a set of free exercises arranged in the syllabus for the day, as below :—

TABLE OF EXERCISES FOR FOUR SHORT LESSONS IN SCHOOL.

MONDAY.	Arm exercises, Nos. 1, 2, 3. Head movements. Combination exercises, 1, 3, 5.
TUESDAY.	Arm exercises, Nos. 4, 5, 6, 7. Body (trunk) movements. Combination exercises, 7 & 8.
WEDNESDAY.	Arm exercises Nos. 8, 9, 10. Feet and leg movements. Combination exercises, 2, 5, 7.
THURSDAY.	Arm exercises, Nos. 1, 2, 3, 4. Body (trunk) movements. Combination exercises, 7 & 8.

DAILY. Turns, dressing; on and off forms; in and out of desks.

Stand. I. Take exercises for Monday and Tuesday only.

" II. " " " Monday, Tuesday and Wednesday.

" III. and upwards, as arranged.

Sometimes the whole of the children in the school are arranged at one arm's distance in the school yard and the set of exercises is conducted by one teacher. Thus time is saved, and the exercises are more beneficial to the children than when taken in the class rooms.

The moral effect of combined exercises is worthy of mention. Each child in a squad is on terms of practical equality with all the rest. There is no opportunity afforded to any one of obtaining distinction at the expense of the others; the success of the movements depends throughout upon the complete subordination of every child to the instruction and orders which issue from the teacher; children soon learn to appreciate what is required in order to command a successful performance, and thus come to take an eager and intelligent interest in the means employed to secure it. In this way they can be brought to recognise from their earliest years that there is a right way and a wrong way of doing even the very simplest things; they imperceptibly acquire the meaning of those invaluable qualities "form" and "style," and unconsciously develop the habit of doing what they are told to do, and doing it promptly—a habit which becomes strengthened by use.



As the result of my experience, I should say there is no more popular subject taken in the schools than physical exercises. The scholars like the work, and the teachers are practically unanimous in their appreciation and commendation of the beneficial results which have followed the systematic training their pupils now undergo.

SAMUEL BOTT,

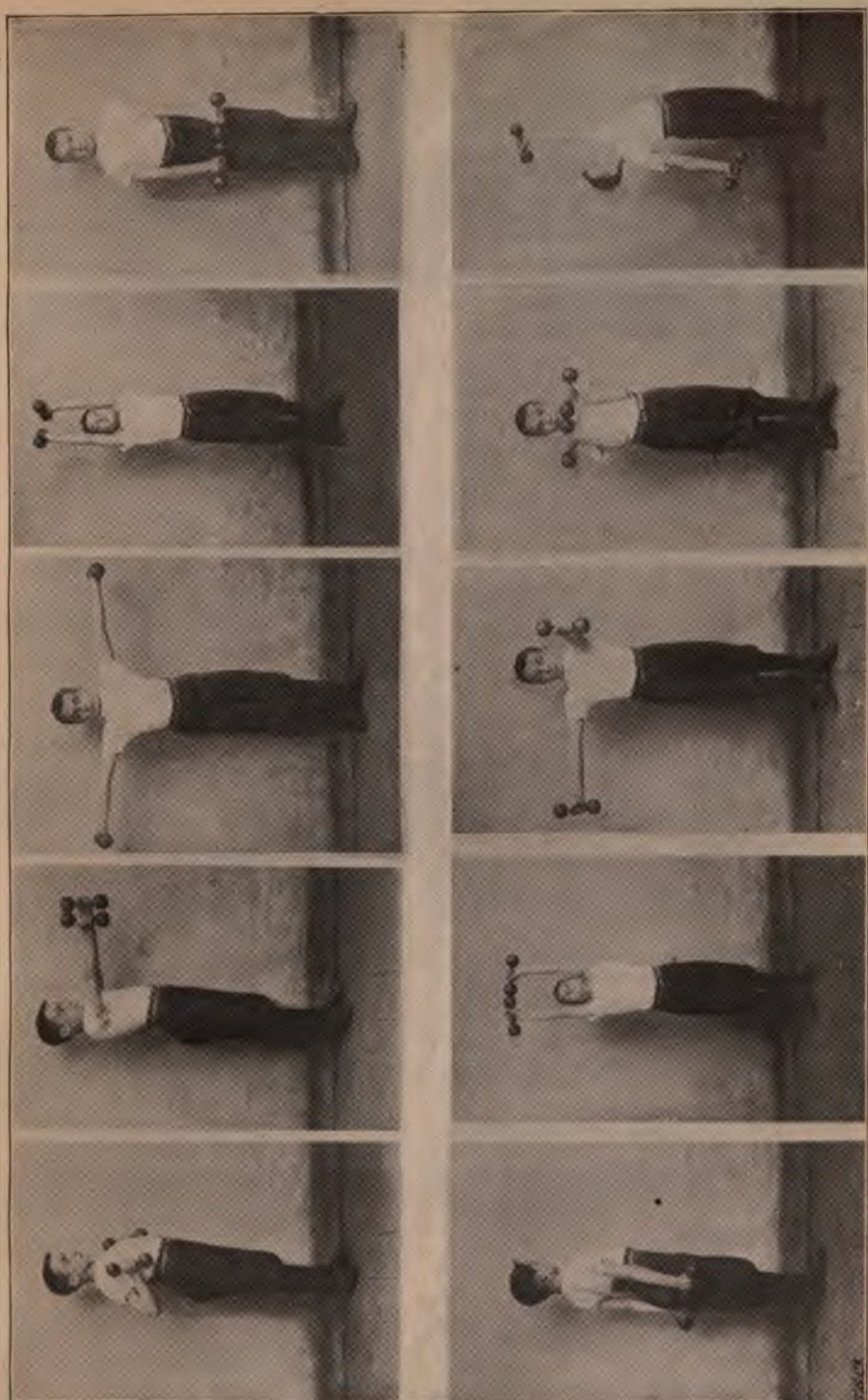
*Superintendent Teacher of Physical Exercises  
to the Birmingham School Board.*

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The following photographs show :—

- (a) squads and classes at physical exercises.
- (b) illustrations of some of the positions in the various exercises.

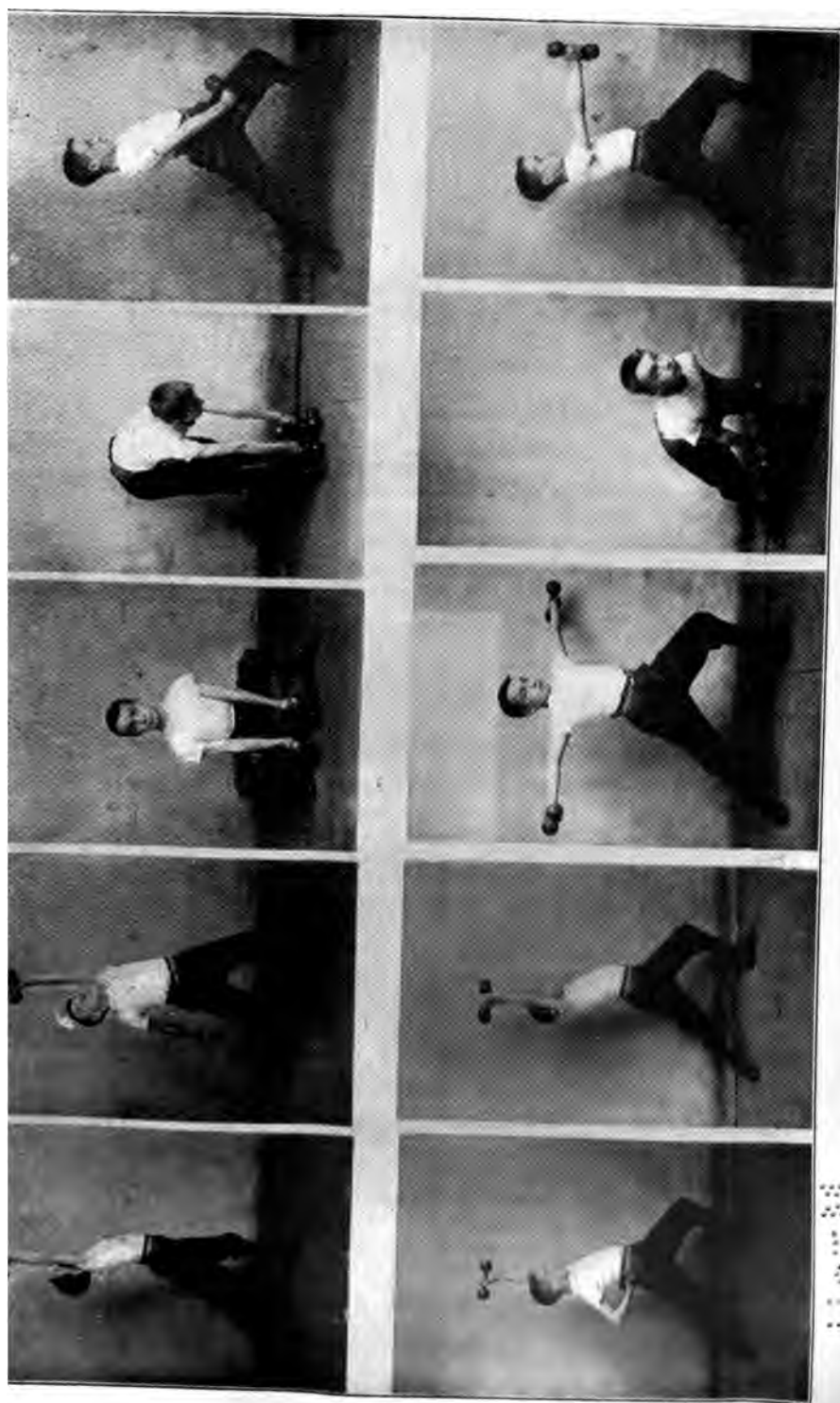
- Plate 1. Represents a squad of 200 boys executing the first arm exercise.
- „ 2. Represents a squad of 200 girls at free body movements.
  - „ 3. Illustrates some of the chief free body movements.
  - „ 4. Represents a class of 32 boys at dumb-bell drill.
  - „ 5. Illustrates some of the elementary dumb-bell movements.
  - „ 6. Illustrates some of the advanced dumb-bell movements.
  - „ 7. Represents a class of girls at stave exercises.
  - „ 8. Illustrates some of the elementary stave movements.
  - „ 9. Illustrates some of the advanced stave movements.
  - 10. Represents a class at Indian club exercises.
  - „ 11. Illustrates some of the Indian club movements.
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6. SOME OF THE ADVANCED DUMB-BELL MOVEMENTS.



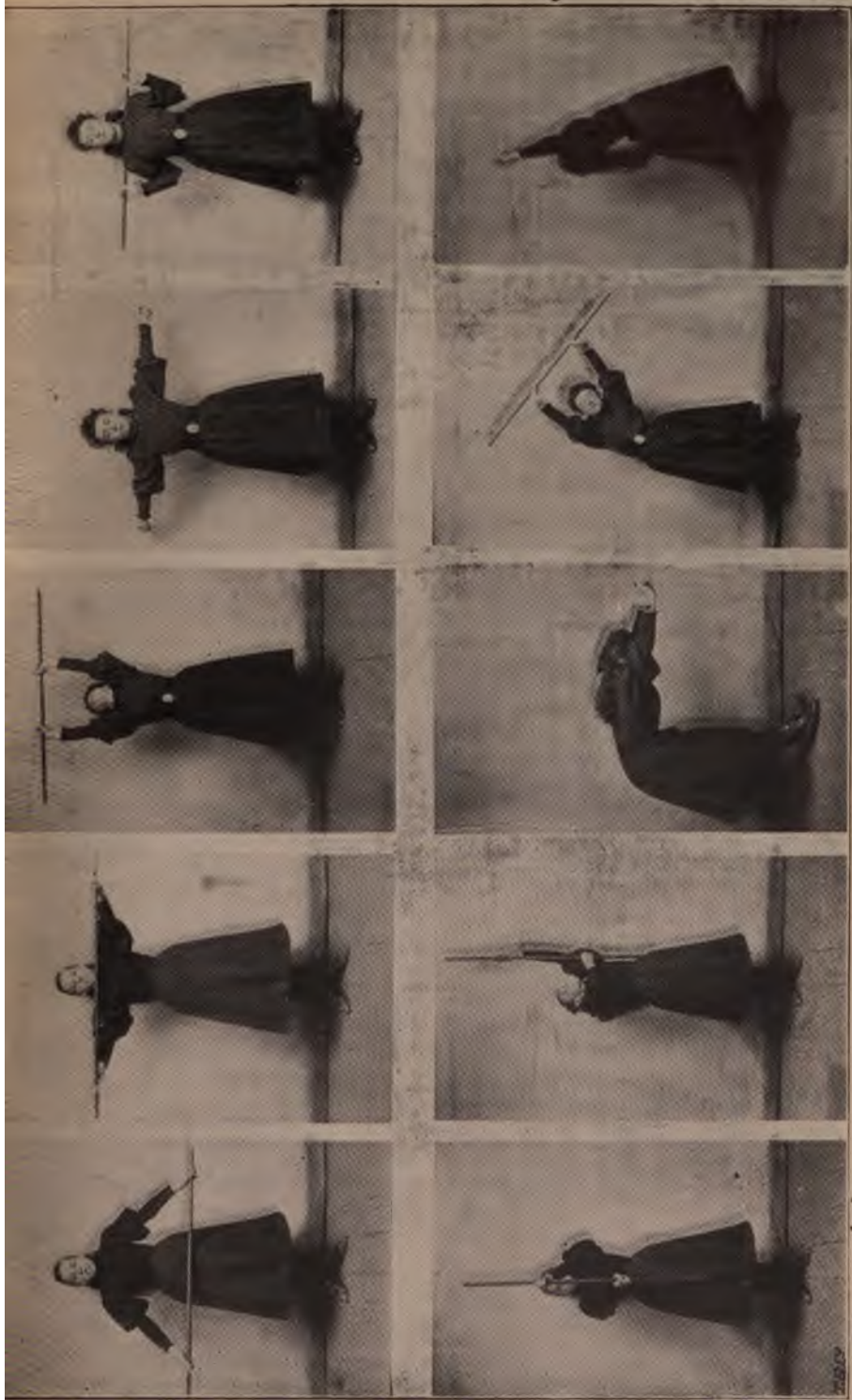
35



7. A CLASS OF GIRLS AT STAFF EXERCISES.



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8. SOME OF THE ELEMENTARY STAVE MOVEMENTS.

U.S.A.

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10. A CLASS AT INDIAN CLUB EXERCISES

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II. SOME OF THE INDIAN CLUB MOVEMENTS.

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## APPENDIX.

**Physical Training of Pupil-Teachers in Birmingham Board Schools.**

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A SYNOPSIS OF THE PHYSICAL TRAINING RECEIVED BY THE  
BIRMINGHAM SCHOOL BOARD PUPIL - TEACHERS (GIRLS)  
AT THE BIRMINGHAM ATHLETIC INSTITUTE, UNDER THE  
DIRECTION OF PROFESSOR F. M. CLEAVE.

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Physical training forms part of the general education of the Board's Pupil-Teachers during the five years of their probationership and apprenticeship. Each Pupil - Teacher attends the Birmingham Athletic Institute on one of five mornings in each week in the following order, viz. :—

Candidates	...	Fridays	...	9.15 to 10.15.
1st year	...	Thursdays	...	9.15 to 10.45.
2nd year	...	Tuesdays	...	" "
3rd year	...	Wednesdays...	...	" "
4th year	...	Mondays	...	" "

They have special accommodation, such as well ventilated dressing-rooms with every convenience, gymnasium (120 ft.  $\times$  50) and necessary apparatus. There are two instructors; and a mistress, one of the Staff of the Board's Central Classes, is always in attendance.

The system of work carried out by Mr. Cleave is so arranged that it shall be both instructive and recreative.

The principal subjects taught are:—Swedish Drill, Indian Clubs, Wands, Marching, Wheeling, Running and Light Gymnastics. At the end of the fourth year an examination is held and certificates granted (recognised by the Education Department, Whitehall), to the successful pupils.

To show the thoroughness of this examination, a period of six months is set apart for preparation. During this period, lectures are given by the Director on the Physiology of bodily exercises. Before being examined in the practical part of the work each pupil must pass the examination in Theory held by Dr. Sydney Short. The various parts of this examination are spread over a period of three months.

The following gives the Syllabus for the Examination, viz. :—

BIRMINGHAM ATHLETIC INSTITUTE, JOHN BRIGHT STREET.

President and Treasurer, Henry Mitchell, Esq. ; Vice-President, C. E. Matthews, Esq. J.P. : Chairman of Council, Geo. H. Kenrick, Esq.

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SYLLABUS of requirements for the Elementary Teacher's Physical Training Certificate. (Recognised by the Education Department, Whitehall.)

Honorary Examiners, T. Sydney Short, M.D., M.R.C.P., D.P.H. (Cantab.), Professor Fred M. Clease.

#### THEORETICAL.

Candidates will be examined and must pass in the following before taking the Practical part.

#### PHYSIOLOGY OF EXERCISE.

##### *Respiration.*—

Reasons for breathing. Why air is taken into the body. The change that takes place in the air in the lungs. The muscles that are used in respiration. The type of exercise which increases the respiratory power. Breathlessness and its causes.

##### *Circulation.*—

The movement of the blood through the body. The changes which take place in the blood in the lungs and in the rest of the body. The effect of muscular movement on the circulation. Healthy and unhealthy blood, and their effects upon the power of endurance.

##### *Muscular Work.*—

How muscles move the body. The bones as levers. The reasons of fatigue of mind and body. To what stiffness and strain are due. The kind of exercises that fatigue most. How fatigue may be recognised. Association between fatigue and want of food. The reasons for rest. What happens during rest. How would you tell how much rest, and what kind of rest, are required ?

##### *Choice of Exercise.*—

Indications which would lead to the choice of exercise suitable for all sorts and conditions of children. How would you tell if the exercise chosen has proved

unsuitable? The effect of each type of exercise on the (1) mind, and (2) body. Effect of the muscular condition on the brain and nerves.

The environment of children during exercise, with regard to clothes, atmosphere, room, music, etc.

Each Candidate will be required to send in a paper describing six simple Swedish and Indian club exercises, other than taught at the Athletic Institute, suitable for each of the following Standards, viz.:

First, Fourth, and Seventh, Girls.

Also six Dumb-bell exercises suitable for Boys in each of the above mentioned Standards; likewise to name the principal muscles intended to be exercised.

Illustrations will help the Examiner.

#### PRACTICAL.

All Candidates will be required to satisfy the Examiner as to their ability in performing *and teaching* the following movements, viz.:

Running, Marching, Wheeling, Class Formations, Swedish Drill, Indian Clubs, and *Birmingham School Board requirements.*

J. ADAMS *Secretary.*

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### Physical Training under the Leeds School Board.

No effort has been spared by the Leeds School Board to make the Physical Training as thorough and complete as possible. Over 52,000 Scholars receive instruction in Physical Drill, and Scholars of the Upper Standards (IV. to VII.) are also taught to swim. The Physical Drill is divided into two main sections, Military Drill, and Physical Exercises with dumb-bells and other apparatus. The Military Drill secures smartness and precision in class movements, and the Physical Exercises strengthen the muscles and develop the physique of the children.\*

The work may be most conveniently reported upon under the following heads:—

- (a) *Evening Classes for Teachers*, to thoroughly ground the Teaching Staff in the various movements and thus enable them to efficiently train their own Scholars.
- (b) *Training of Children in Elementary Board Schools* by Teachers who have received certificates of proficiency under head A.
- (c) *Training of Children in Higher Grade Board Schools*, with use of Gymnasium, by special Instructors.
- (d) *Training of Children in Board Industrial Schools.*
- (e) *Swimming.*

#### (a) *Evening Classes for Teachers.*

In 1883 the Board established classes in Swedish Drill under the supervision of a trained teacher, and this system was continued in the girls' schools until the year 1890, when Teachers' classes in Musical Drill were established at the Gymnasium of the Central Higher Grade School. With certain modifications these classes have been continued with conspicuous success to the present time.

rise of  
ruction.

Each session extends over 20 weeks, with two lessons of one hour per week. Separate classes are held for Head and Assistant Mistresses and Head and Assistant Masters. Teachers from Voluntary Schools are admitted on payment of a small fee.

Thorough instruction is given in elementary military drill, the various "Turns," Sizing Ranks, Forming Company, Forming Fours, Right and Left Form, etc., and also in Physical Exercises with Dumb-bells. These exercises have been very carefully arranged, from simple movements to more advanced, to bring into vigorous action the principal muscles of the body, special

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\* The "Scheme for Drill and Physical Exercises to be taught in the Schools of the Leeds School Board" has been printed by Messrs. McCorquodale & Co., Ltd., and can be obtained at the offices of the Leeds School Board. The pamphlet can also be seen at the Education Department Library, St. Stephen's House, Cannon Row, S.W.

attention being given to those of the trunk. The Instructor explains the effect of each exercise on the particular group of muscles used in performing the movement.

At the end of the Session the Teachers are examined by the Board's Instructor, and, if competent, are granted a Certificate of Proficiency by the Board. The Examination is very searching, Candidates having to perform all the Exercises taken during the Course and to thoroughly satisfy the Examiner of their ability to handle a class. One thousand and forty Teachers' Certificates have been granted during the past six years.

Certificate  
of Pro-  
ficiency.

The effect of the regular and systematic exercise on the Teachers is most beneficial, especially amongst the Mistresses. When the Session begins, the Teachers often show a stooping and inert figure, while towards the end of the course a decided improvement in their carriage and bearing is noticeable. Enquiry amongst the Teachers shows that attendance at these classes improves their general health.

Effect of  
Exercises  
the Teach

In continuation of the Evening Training classes Saturday morning has been set apart for Recreative classes for those Teachers who desire to take a Course of Gymnastic training. These classes have been well attended by the Mistresses, to the manifest improvement of their health and physique. The Exercises are carefully chosen, and each student is under the immediate supervision of the Instructor.

Special  
Recreative  
Gymnast  
Classes.

In addition to the classes for Teachers the Board has established night classes for young men in business. These are held in the branch gymnasias at Beverley Street and Cross Stamford Street Schools, and have been attended with success.

Gymnast  
Classes for  
Young Men  
in Business

A small fee is charged which is reduced when the member is attending one of the Board's night schools. Instruction is given in various musical drills and in Elementary and Advanced Gymnastics. A number of young men who have regularly attended these classes have made excellent use of the skill thus acquired by forming and instructing classes in connection with places of worship in the City and District. One old member of the Beverley Street class has become one of the finest amateur gymnasts in the Kingdom and has won numerous medals.

#### *(b) Training of Children in Elementary Board Schools.*

Prior to 1895 Boys and Girls were trained under different systems; the Boys were instructed in Military Drill with a few extension movements under the supervision of a Drill Sergeant, and the girls were taught Musical Drill with Dumb-bells and Wands.

In 1895 the present system of combined Military Drill and Physical Exercises was introduced subject to suitable modifications for girls.

The work is now taken by the Teachers, who are responsible for their own classes.

Relation  
between  
Teacher  
and  
Child.

This arrangement works well, as both Teachers and Children feel the Exercise a pleasant change from ordinary School Studies, and



enter with interest into the various movements. One great advantage is that the Teacher knows fairly well the capacity of each child and can thus relieve the weakly ones from any undue strain. Children unfit for drill are excused.

Gradation  
of Exercises.

The exercises are carefully graded, those for the lower standards being simple and gradually leading up to those for the upper standards. The exercises are taken in the open air when possible; if the weather be inclement, they are performed in the School and the doors and windows are thrown open to ensure ventilation. Standing on forms or seats is prohibited.

Time allotted  
to Exercises.

Half an hour per week is allotted in the School Time Table to Drill and Physical Exercises. If, however, the Teacher observes that the attention of the Class is flagging at any time during an ordinary school lesson, the children are instructed to stand up in their class places and a few vigorous exercises are taken for two or three minutes; this short exercise seems to brighten the class and the lesson is then resumed with fresh spirit.

Effect on  
timid  
children.

Experience proves that a systematic course of physical training has a decidedly beneficial effect on children of a somewhat timid retiring nature, who are stimulated by having to join in and keep up with the others.

Pianos in  
Schools.

Recognising the value of music as an aid to physical exercise, the Board has provided pianos in most of the Schools, and these have been found to add materially to the brightness, precision and finish of the movements.

H.M.  
Inspector's  
Visits.

Prior to 1895 H.M. Inspector of Schools inspected the Military Drill and Physical exercises of boys collectively at two Centres on days fixed by him during the summer, and in connection with this parade the various Schools competed for Banners which hung during the ensuing twelve months in the successful Schools. These competitions have been discontinued and the Inspectors now inspect the Physical Exercises *in all Schools* as an ordinary subject on their official visits. This change has met with the general approval of the Teachers, the work is more evenly divided over the School year, and the danger of overstrain caused by the competitions is removed.

Infants'  
Drills.

In the Infants' Schools various simple drills are taken with Musical Bells, Wands, Hoops, etc. and for the very little ones the exercises are made as pleasing as possible.

Each Infants' School under the Board is now supplied with a piano and the exercises are thus rendered very bright and attractive.

Supervision  
by Special-  
ists.

The Instructors periodically visit each School to inspect the work of the teachers, and to give advice and assistance as to the best methods of carrying out the Board's Scheme.

(c) *Training of Children in Higher Grade Schools.*

The Central Higher Grade and the Southern Higher Grade Schools are each provided with a fully equipped Gymnasium containing all necessary appliances for thoroughly developing the physique.



The children at the Central Higher Grade School are taught (by special Instructors) various musical drills with Dumb-bells, Wands, Indian Clubs, etc., and also receive careful instruction in gymnastic exercises on the varied apparatus.

Central  
Higher Gr  
School.

In selecting the exercises an eclectic method has been pursued, no particular system has been strictly adopted, but the most suitable exercises have been selected from each. The movements are all graded to suit the capacity of the various classes. No hazardous movements are allowed.

Eclectic  
Selection  
Exercises.

Girls who take the full course of gymnastics are required to wear a special costume appropriate to the work.

Gymnastic  
for Girls.

Every care is taken to avoid overstrain, and the Instructors superintend the training of each girl.

The effect of regular, careful gymnastic exercise on girls from 12 to 16 years of age has been found most beneficial.

Influence  
the health  
of girls from  
12 to 16.

At the Southern Higher Grade School a similar system has been adopted, a special Instructor visiting the School two days per week to give instruction in musical drills and gymnastics.

Southern  
Higher Gr  
Gymnasium

In addition to the two Higher Grade Schools, the Board has provided a fully equipped gymnasium at Cross Stamford Street School, which is situated in a very poor quarter of the City. The Boys take simple gymnastic exercises under the supervision of the Class Teachers, as well as the usual Drills.

Cross  
Stamford  
Street  
Gymnasium

The physique of the lads has been greatly improved by their gymnastic training.

#### *(d) Industrial Schools.*

The children attending the Board's Day Industrial Schools at Czar Street and Edgar Street receive regular weekly instruction in Military Drill and Physical Exercises with Dumb-bells.

Day  
Industrial  
Schools.

The Boys at Shadwell Industrial School, in addition to Military Drill and Physical Exercises with Dumb-bells and Wands, have some gymnastic apparatus which is greatly appreciated by the older boys.

Residential  
Industrial  
Schools.

The Girls at Thorparch Industrial School take Military Drill and Dumb-bell Exercises, and have also a Gymnasium fitted with the necessary apparatus. The girls take great interest in the gymnastic training, which has had a beneficial effect on their bearing and general physique.

#### *(e) Swimming.*

Recognising the importance of this branch of physical training, the Board erected Baths at their Schools in Czar Street, Darley Street and Hunslet Lane, and as the Corporation also provided two new swimming baths in other quarters of the City, swimming has become one of the ordinary subjects of instruction.

Baths in  
New School

The School Time Tables have been arranged so that the Boys and Girls in Standard IV and upwards may visit the baths once

a fortnight during the Summer Season accompanied by one of the Teachers.

**Time allotted to Lesson.** The Squad is restricted to 24 children, and the Lesson, under a qualified Instructor, lasts for 45 minutes (15 minutes for Land Drill, 15 in the water, and 15 for undressing and dressing).

**Life Saving.** The Land Drill includes instruction in life-saving and in the methods of restoring respiration.

Very weakly children and any who may have a tendency to fits are carefully excluded.

The following statistics of attendances and results will give an idea of the work accomplished during the year 1897:—

<i>Visits paid.</i>	<i>Number under Instruction.</i>	<i>Certificates Issued.</i>
49,337	5,100	663

**Certificates of Proficiency.** Each candidate for Certificate is required to swim 12 yards, but as a matter of fact the average distance actually covered was 33 yards.

**Visiting baths after school hours.** In addition to the swimming instruction during school hours arrangements have been made for the children to visit the baths after school hours, on Saturdays on payment of  $\frac{1}{2}d.$ , and during holidays on payment of  $1d.$  Large numbers of children have availed themselves of this privilege.

**Prizes.** To encourage the children to become expert swimmers, Silver Challenge Cups and Medals have been offered in competition at the close of the season, for proficiency in style and speed.

**Voluntary Class of Teachers.** A voluntary class of teachers has recently been formed and affiliated to the Life-Saving Society.

**Popularity of Swimming Instruction.** The swimming instruction is very popular with both boys and girls. The latter at first were inclined to shrink from the water, but gradually this feeling was conquered, and many of the girls are now expert swimmers.

**Conclusion.** In conclusion, it may be stated that the course of Physical Training under the Leeds School Board has a distinctly beneficial effect on Teachers and Scholars alike. Both look forward with pleasure to the time set apart for exercise.

**Moral effect of exercise.** It may be pointed out that beyond the physical and mental benefit to be derived from the work, the lessons of prompt obedience to word of command and of fixed attention to the movement in progress are invaluable to the scholar, and cannot fail to have a salutary effect.

**Games.** It is pleasing to note the great interest taken by the Teachers in the games of the children. In the playgrounds the staff are often seen vigorously taking part in seasonable games with the scholars, with good results to all concerned.

**Athletic Sports.** Athletic sports are organised annually for the children, and prizes are given to the successful competitors in the various standards.

**Football League.** A School Football League has been formed in Leeds which has

done much to promote a spirit of manliness and fairplay amongst the lads.

It should be borne in mind, however, that as a rule only a chosen team of strong lads from each school takes part in Football Contests, whereas one great advantage of a complete system of Physical Training is that strong and weak, girls and boys, can participate and derive great benefit from the exercise.

R. E. THOMAS  
Instructor in Physical Exercises  
Leeds School Board,

3 December, 1897.

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## THE SCHOOL GARDENS AT THE BOSCOMBE BRITISH SCHOOL.

*Starting a School Garden.*

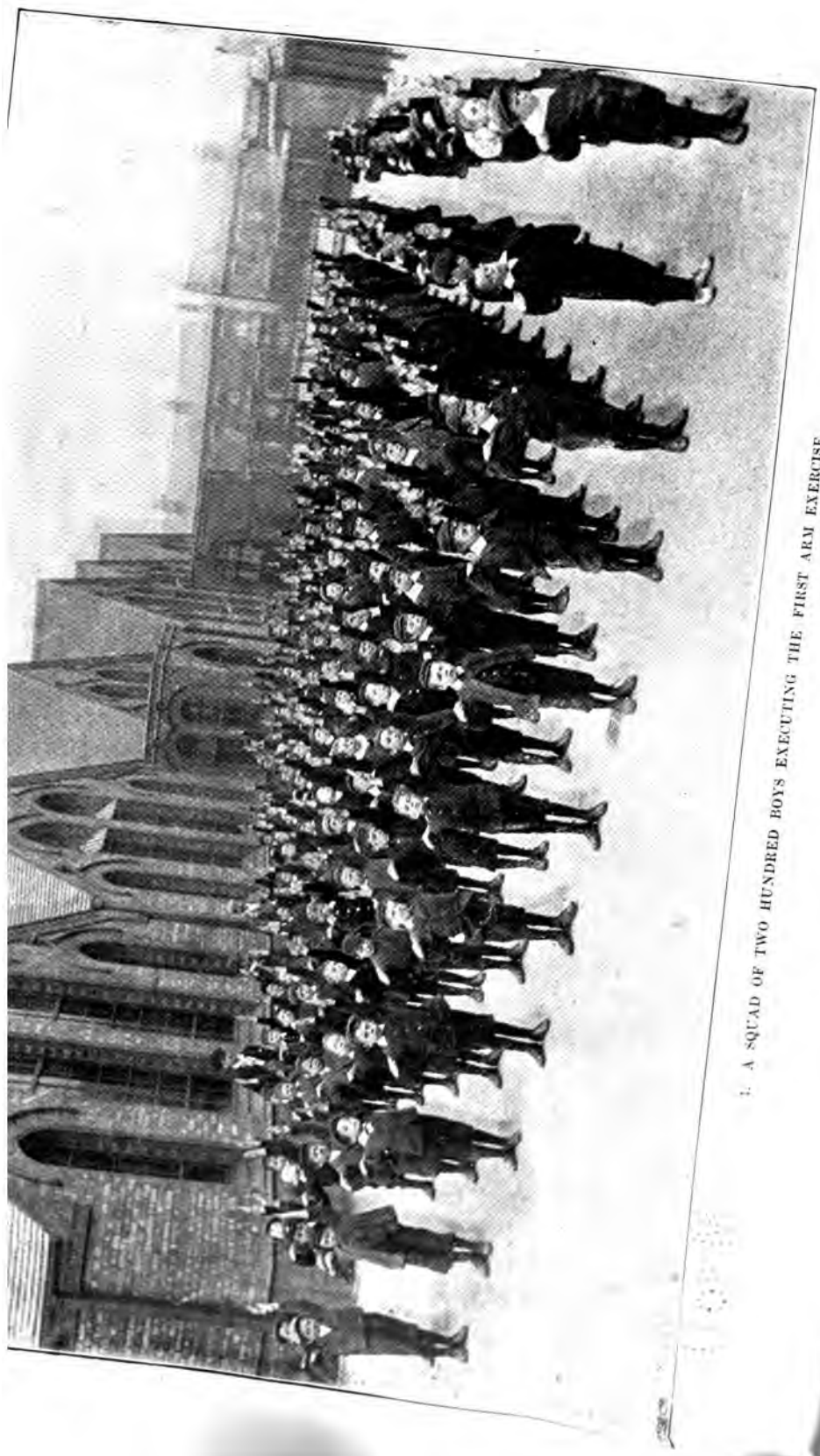
There are two ways of setting boys to work at gardening. They may either cultivate a plot in common, or each boy may be provided with a plot of his own. The latter plan is the better, because it offers superior educational advantages. If, for example, a boy is one of a group cultivating a garden, he cannot know for certain what is the effect of his share in the work. It is only when a boy is sole master of a plot of his own that he can be sure what the results of his efforts really are—whether meritorious or defective.

*The Objects of School Gardening.*

A school garden must not be treated as though it were an allotment. The difference is important, because, if it is ignored, the school garden may prove a pecuniary success but an educational failure. The owner of an allotment naturally seeks to make the greatest commercial profit out of his parcel of land. In the school garden, on the other hand, the boys have partly to receive instruction in the rudiments of the gardener's craft, according to the best methods, and partly to find illustrations for their lessons in natural science, and to make practical application of them. In an allotment the owner often finds it pay better to grow one or two kinds of crops, either for the sake of the demand for them in his market, or because the soil is best suited for them. The school boy should learn how to raise a variety of crops, and will benefit educationally as much by failure as success. Indeed, where the conditions of soil and climate are so favourable that, be the gardening good or bad, the crop is always forthcoming, though the undertaking may prove a greater commercial success, yet as an educational exercise it will have less value than where nature is unkindly and hard to subdue.



(1).—BOYS GOING TO WORK.



1. A SQUAD OF TWO HUNDRED BOYS EXECUTING THE FIRST ARM EXERCISE.

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2 A SQUAD OF TWO HUNDRED GIRLS AT FREE BODY MOVEMENTS;

JOHN





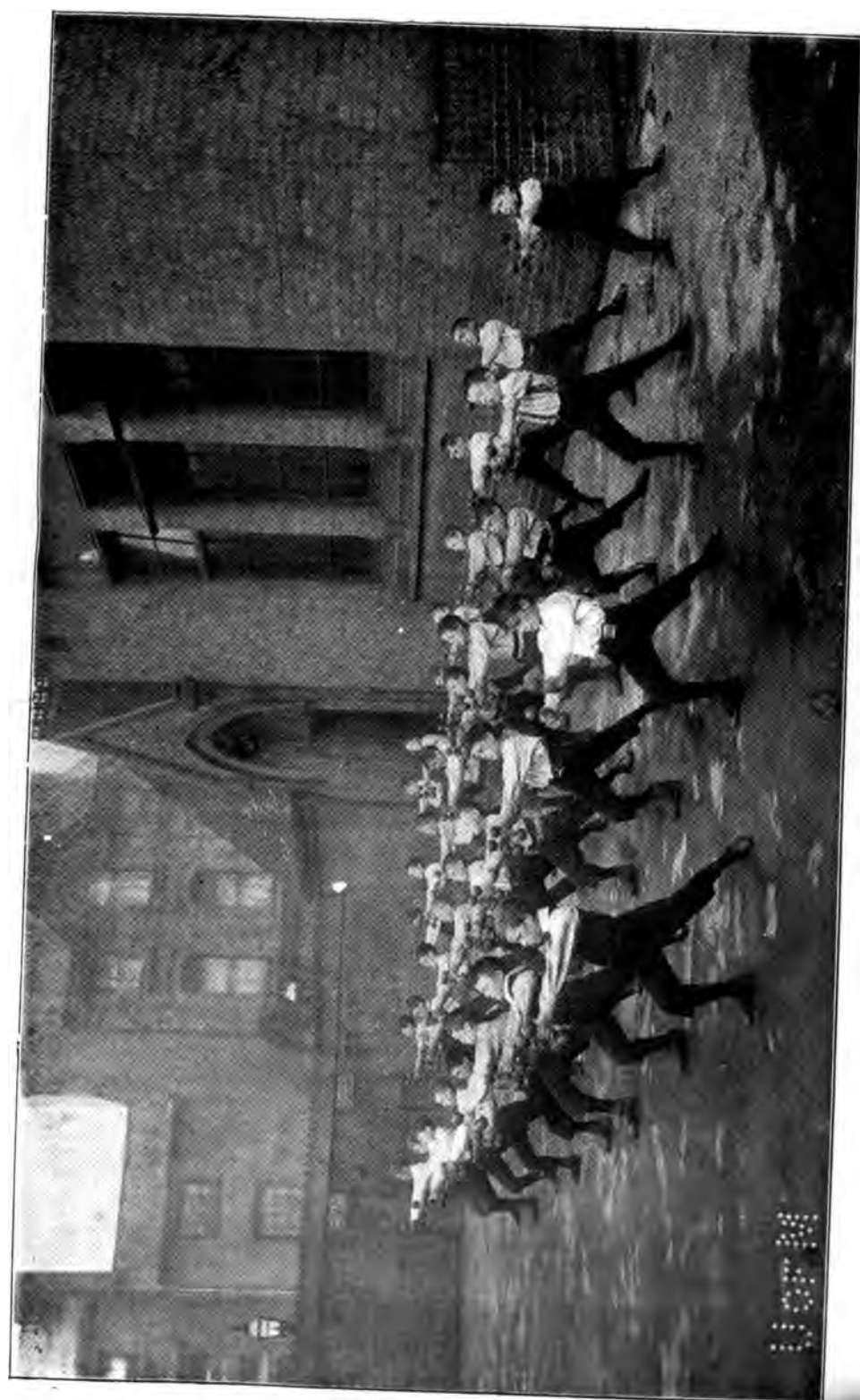
3. SOME OF THE CHIEF FREE BODY MOVEMENTS

U.S.N.



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1



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Again, the object of a school garden is certainly not to put boys as apprentices to gardening. Some boys, no doubt, who learn gardening, will become gardeners in a professional way when they grow older, but it would be wholly out of place in school unless it served a general purpose as well as having a technical aim.

*School Gardens are a Part of General as well as Technical Education.*

A very slight acquaintance with modern text-books and their readers, whether dealing of the farm, or the garden, or the home, is sufficient to show that while many of the plain facts of modern science are assumed by the writers to be matters of general knowledge, most of the readers continue to regard such facts as outside their province and belonging to the peculiar domain of men of science.

Now, some knowledge of the nature of a few of the chief gases and other elements is really indispensable for the farmer, the gardener, and housewife, and it may be acquired in more ways than one. While a girl may study it in connection with cooking and cleaning, a boy may have it brought home to him in connection with a garden plot. The kind of experiments which may be made and studied with advantage in connection with school gardens are described in Laurie's "Food of Plants" (Macmillan), and in an extremely practical and suggestive paper by the Professor of Botany in the Durham College of Science, Mr. M. C. Potter, which was published in the Record of the Association for Promoting Technical and Secondary Education. Mr. J. H. Crawford published in "Natural Science" (July, 1892), a plan for making an agricultural museum, which offers valuable suggestions for associating practical garden work with the study of elementary science in the class-room.

The result of this combined indoor and outdoor instruction will be to spread a much-needed type of general as well as technical knowledge. The rising generation will learn what is the true nature of an experiment, what are the methods of modern science, in what way observations are made and inferences drawn from them, what are the sources of error, and how it comes about that a merely practical man may as easily underrate as overrate the researches of the laboratory.

*The Division of the Ground.*

(1.) *Size, shape, and arrangement of the individual plots.*

Each boy then should have a plot to himself, and in the Boscombe School gardens there are plots for twelve boys. The plots must not be too large, because the boys cannot work more than two afternoons a week. The shape, again, is important, because it is desirable that the boys should be able to perform much of their gardening while standing on the paths between the plots, instead of having to step on the border for every operation. The plots, therefore, measure thirty feet in length and are only ten feet in width. The four corners of each plot are carefully marked by substantial squared pegs firmly driven into the ground. Each plot is numbered, and the numbers are written clearly and boldly on the face of the pegs.

The longer axis of each plot extends in the direction of east to west, and the width is in the direction of north to south. This arrangement facilitates the cropping. The vegetables are planted in rows across the plots from north to south, because this plan gives them the best chance

of thriving. Each particular kind of vegetable is planted in the same line right across all the plots, so that although in the separate plots the rows are short, being only ten feet long, yet, when the whole set of plots is looked at in one view, the vegetables are seen to be planted in long rows extending right across the garden in regular lines, from the north boundary to the south. The comparative success of each boy is thus apparent.



(2.)—BOYS AT WORK.

### *The Cropping of a Plot.*

I will now describe the first cropping of one of the plots. All the others were cropped in the same way. A succession of late autumn and winter vegetables was arranged to follow.

Broad beans.  
Hollow crown parsnips.  
White Spanish onions.  
Bedfordshire champion onion.  
Radishes.  
Lettuce (two rows, cos and cabbage).  
Potatoes (three rows—early, medium, and late).  
Brussels sprouts.  
Cauliflower.  
James' intermediate carrot.  
Shorthorn carrot.  
Pineapple beet.  
Cabbage (Wheeler).  
Drumhead savoy.  
Autumn cauliflower (Veitch's Autumn Giant).  
Scarlet runners.



The scarlet runners were planted on the side next the road, and served as a screen against the depredations of roughs and idlers, who, in the absence of the boys, would occasionally steal their best vegetables.

(2.) *Other plots for working in common.*

Besides the ground which was taken up by the twelve plots and the paths between them, the enclosure contained space for two other purposes.

- (a.) Along the south side there was a border, about one hundred feet in length and ten in width for growing certain vegetables which did not lend themselves readily to separate treatment in the twelve plots, such as asparagus, marrow, and seakale. Here too were planted several pot herbs, such as thyme, sage, marjoram, etc., and also seedlings to be pricked out later in the other plots, such as lettuce, celery, leeks, sprouts, and cabbage.
- (b.) At the east end of the ground there was space for four plots of the same size as the twelve others—namely, thirty feet by ten—in which certain fruit trees were planted, including standard apples, pears, and plums, and also such bush fruit as currants, gooseberries, and raspberries. Room was also found for some tomatoes, a strawberry bed, and a few herbaceous flowers, by way of ornament, and some roses. In the north-east corner a small frame, 6ft. by 4ft., was placed for the purpose of growing seedlings, which might thus be preserved through the winter for early spring planting. In these plots the boys learnt how to bud roses, to train fruit trees, and to make grafts in different ways.

*Care of Tools.*

The ground was enclosed by a barbed wire fencing, which was stretched upon strong posts. Inside this fence was planted a privet hedge, in which were set at intervals a few trees, such as poplars, maple, birch, and ash.

At the gate of the enclosure a wooden hut was built for the accommodation of the tools and seeds. It is made of tarred boards, with a corrugated iron roof. In its dimensions it is nine feet square, and its height at the back is nine feet, sloping towards the front to 6ft. where the entrance is made. The floor is paved with brick, and suitable shelves are provided. Each plot has a set of tools assigned to it, and each tool is numbered to correspond with the plot to which it belongs. Each set of tools hangs from a peg, which is numbered in correspondence with the tools. The boys are taught to keep their tools scrupulously clean by aid of linseed oil and paraffin, and to put them away in an orderly manner after using them.

*List of Tools.*

The following is a list of the tools which are provided for each plot. The sizes given are adapted to boys' use:—

- 1 Dutch hoe (four-inch).
- 1 Draw hoe (four-inch).
- 1 Fork (four-prong).
- 1 Spade (seven inches wide and eleven inches long).
- 1 Rake (ten-comb).



Besides these there are other tools for common use. The following is a list of them :—

List of tools to be used in common—

- 1 Besom.
- 1 Mallet.
- 2 Wheelbarrows.
- 1 Water-can.
- 2 Boat baskets.
- 4 Lines, sixty feet in length.

The plans on pages 230 and 231 show the details of the arrangements which have been described.

#### *The Effects of Good and Bad Gardening Contrasted.*

The soil was of the worst possible description, consisting of almost pure gravel. The boys had obviously to overcome natural difficulties. Cultivation was commenced by trenching to a depth of two feet, which involves digging out three spits. Stable manure was applied somewhat liberally at the bottom of the trench. The summer of 1896 was very dry, but, owing to this "bastard" trenching, although there was no artificial watering, the fine growth of the crops in these plots as compared with the scanty show in neighbouring gardens, where there was far less labour expended, proved the truth of the old saying, "justissima tellus," for the honest earth well repaid all the toil. The produce of the gardens received certificates of merit at more than one horticultural show. The contrast between the results of good and bad gardening forms a most telling object lesson, and the difference in the crops according as the boys are more or less skilful, or as they are careful or careless, is well demonstrated by the arrangement of the rows of vegetables which cross the plots in a straight line.

In the report of the Woburn Fruit Farm for 1897 (Longmans), a method is described of making approximate measurements of the comparative loss of growth which is due to neglect and bad method. The instructor of the Boscombe School gardens, who is himself a nurseryman, is attempting to teach the boys to practice the method of measurement there described.

#### *The Young Gardener's Diary and Account Book.*

The boys are taught to make rough notes on the ground, recording the operations of each day, the dates of planting seeds, and the names of the sorts selected. Hints are added as to the distance between the rows of plants, and also between the plants in a row, and a record is made of the kind of manure which is used, and other matters. A daily record of the weather is kept, and the amount of rainfall observed and noted. The notes are afterwards worked up in a systematic form, and serve as a gardener's diary of great value for future use when in later life the boys do some gardening of their own.

A few extracts from one of these diaries are here subjoined :—

#### *Extracts from Boy's Gardening Diary.*

"March 15.—Sowing onion seed. White Spanish and Bedfordshire Champion. One row of each, one foot apart; made drill about three inches deep; after sowing the seed, raked the soil over them and patted it down with the spade.

- "March 22.—Trenching and manuring. The broad beans and peas are showing above ground.  
"March 23, 26, 29.—Trenching, manuring, and weeding.  
"April 2.—Finished trenching on all the plots to-day. Edging and weeding paths.  
"May 14.—Sowed one row of cabbage lettuce in the experimental plot. Dressed the cabbage plants with four different kinds of artificial manure, namely—  
    Two rows with nitrate of soda.  
    Two rows of nitrate silicate.  
    Two rows with native guano.  
    One row with ichthemic guano."



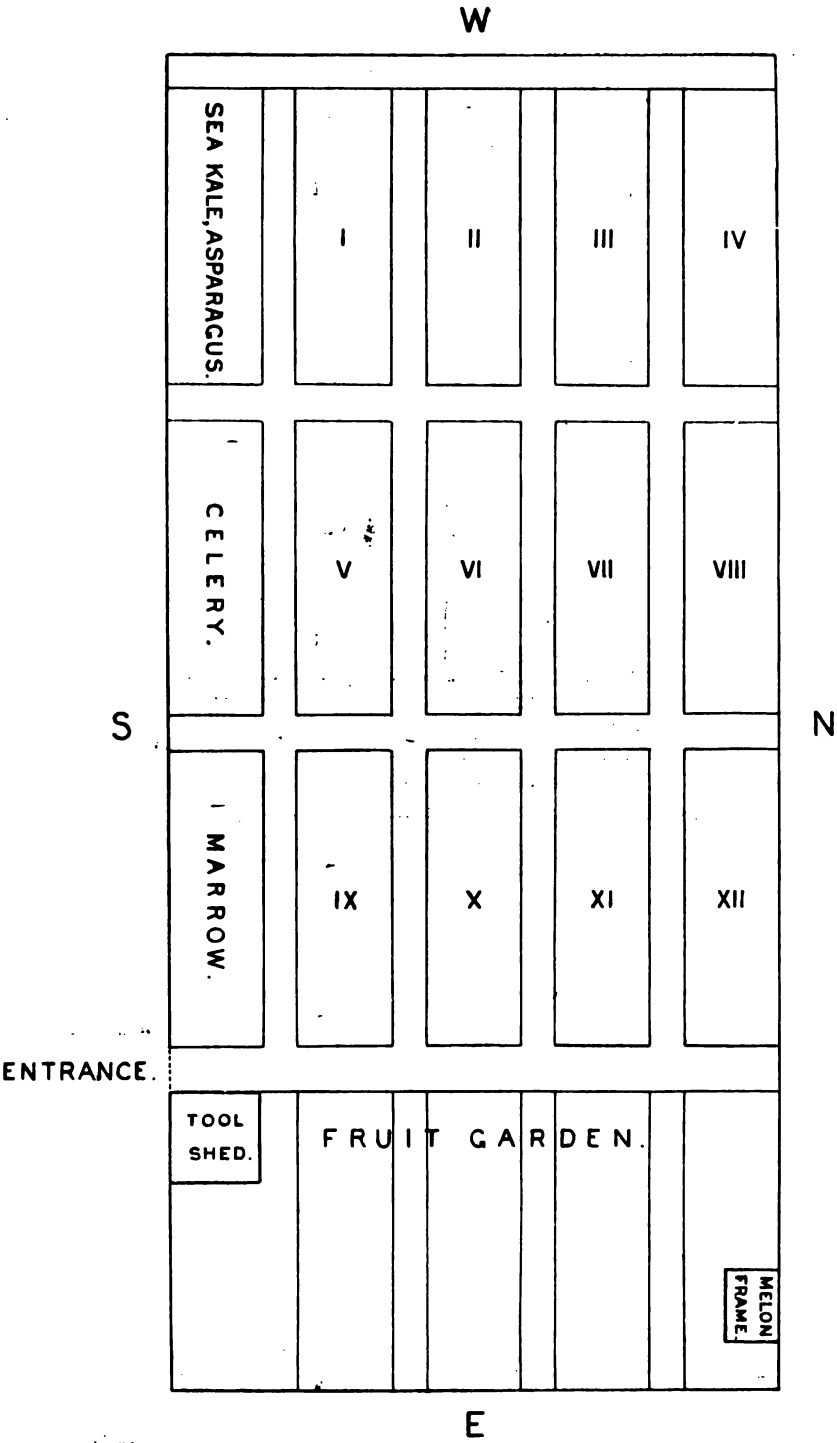
(3).—TRENCHING THE PLOTS.

#### *Account Books.*

Each boy sold the produce of his own plot, and the money so earned was brought to the instructor, who received it and entered the amount in an account book, reserving a separate page for each plot. Each boy also kept an account book of his own, so that he might feel sure that he received his proper share. The money is divided, and one-half is devoted to the purchase of seeds for the next season, while the other half is given to the boys in proportion to their earnings. In this way some boys earned as much as eight shillings in the year, while the average was about six shillings.

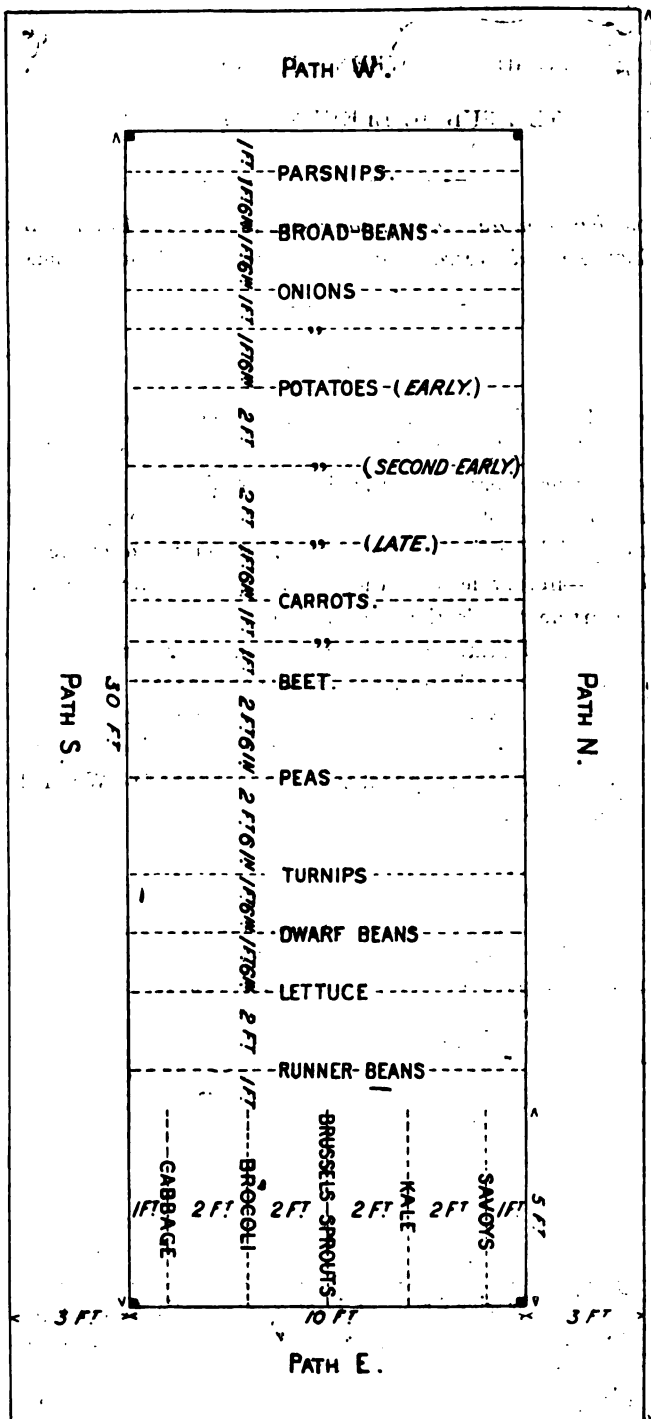
In conclusion, I may add that a year's garden work had a strikingly beneficial effect upon the growth and physical development of the boys who had thus done their part to carry out the somewhat neglected instruction to man to go forth "and till the ground from whence he was taken."

T. G. ROOPER.



GENERAL PLAN OF SCHOOL GARDEN





PLAN OF SINGLE PLOT.

## THE CONNECTION BETWEEN THE PUBLIC LIBRARY AND THE PUBLIC ELEMENTARY SCHOOL.

A REPORT *based on an Inquiry addressed to the* FREE PUBLIC LIBRARIES  
of ENGLAND and WALES *and certain* AMERICAN PUBLIC LIBRARIES.

### SUMMARY.

Origin of the Free Library Movement—its educational character—foreign opinion—origin of children's libraries in connection with public libraries—branch libraries in schools—school deliveries—head teachers as guarantors of scholars—advertising the library through the school—teachers' special privileges—unsuccessful attempts to connect school and library—library lessons, the Cardiff system—libraries with children's departments—Scotland and Ireland.

Typical United States libraries and their work for the children—teachers' cards—branch libraries in schools—school deliveries—children's departments—catalogues and lists—reading courses—class reference work—statistics—the Minnesota State Commission—some experts' opinions—summary and criticism of methods—Who is to pay?—List of papers on the subject.

When the history of public education in Britain during the present century shall come to be written the name of William Ewart, M.P., will have more claims than one to consideration by the historian. He it was who drew the report, in 1836, which led to the establishment of the Schools of Design at Somerset House, which have since developed into the Science and Art Department; who moved, in 1841, for an annual statement on education from a Minister of the Crown, and afterwards saw his motion carried into effect; and who took the first public steps which led to the establishment of competitive examinations for appointments in the public service. It was he also, in conjunction with Edward Edwards, who established the public rate-supported library as an institution in the British educational system. The first instance of the establishment of a rate-supported library by a municipal corporation is that of the library at the Warrington Museum, founded in 1848, and the earliest Public Libraries Act, long known as Ewart's Act, was passed in 1850, twenty years before the epoch-making Elementary Education Act of 1870. At first the spread of public libraries was slow, for when Forster's famous Act was passed there were hardly more than fifty places in the United Kingdom which had adopted the Public Libraries Acts, and

probably not more than forty which had really established public libraries. At present about 340 adoptions, of which nearly 300 are for England and Wales, have been recorded; while public libraries freely open to the people and supported out of the rates exist in more than 300 towns, villages, and districts in Great Britain and Ireland. Notwithstanding this success, there has been in certain quarters a distrust of the free library, from a fear that its main functions were those of amusement and recreation, and the percentage of fiction issued to the readers has again and again been adduced as a ground for that distrust. This is not the place to defend the free library from a serious imputation, but it is desirable briefly to state its claims to support as an educational institution, apart even from any special effort to bring its work into connection with that of the public school.

In the first place, it must be remembered that the Free Public Library provides books of every class of printed matter (not immoral) for the use of the people in its vicinity.

No one can take up the catalogue of any fairly established free library without finding among its entries works of a philosophical, artistic, technical, or encyclopædic kind which no subscriber to any of the great non-specialist libraries could obtain on loan for a subscription of one or two guineas per annum. Apart from the British Museum, it is only such a rare institution as the London Library which could afford to add to its stores much that is being accumulated in the public libraries of this country. Now, it is just this kind of matter which is needed for the select company who are to lead the van in local and national progress, and the public library accomplishes a very useful educational work in providing for such.

In the second place, the provision of literature of a solid kind is in the aggregate very greatly used in the public libraries.

From 20 to 25 per cent. of the works issued from free libraries are books of what is usually characterised as "solid" literature. This means that about six or seven million issues other than those of works of fiction are annually recorded by the free libraries in the United Kingdom.

Lastly, teachers find very much material for their studies and the preparation of their lessons in the free libraries. The annual reports of most public libraries contain a table showing the percentage of people engaged in various industries who use the library. In all the tables which I have seen the teaching profession is represented by a quite unusual proportion as compared with other businesses and professions.

It is not surprising, then, that the English (and American) public libraries have latterly attracted some attention in those countries to which we have been apt to turn as models for our own educational needs; especially do I refer to France, Germany, and Denmark. My friend Mr. A. S. Steenberg, of Horsens, has been very active lately in reporting the results of his visits to English free libraries to his countrymen through the educational Press and the teachers' associations of the Scandinavian countries; and the representative of the German Government at the recent International Conference of Librarians



in London assured me that Germany looks to England and America for the lead in all that concerns library organisation and administration; while the new French edition by M. Jules Laude of Dr. Graessel's *Grundzüge der Bibliothekslehre* gives hundreds of references to the publications of the English and American librarians.

True it is, however, that the English public library has not yet taken the place it is capable of holding in the English educational system. Yet there are abundant signs of progress.

Birkenhead

The reaching out of the library towards the child began probably in the year 1865 at Birkenhead, where Mr. Richard Hinton, the librarian, reported that 743 juvenile books had been issued. At that time only about twenty towns in England had adopted the Public Libraries Acts, and some of these had hardly had time to be organised and opened. The Birkenhead innovation was evidently successful, for in 1870, 2,608 issues of books to children were recorded. In 1881 the stock of children's books reached 2,000 volumes, and a separate catalogue of the "children's library" was reported as in preparation. Now there are at least 106 public library authorities in England and Wales, which either have a separate library or separate section of a library to supply books to children. The first entirely separate children's library as part of a public library system was begun in 1882 at Nottingham, through the donation of £500 by the late Samuel Morley, Esq., M.P.

Nottingham.

Leeds.

The first free public library authority to get into direct relationship with the public elementary schools appears to have been that of Leeds, for in a paper read in 1877 to the first International Conference of Librarians in London, Mr. W. H. K. Wright drew attention to the work of the Leeds Public Libraries Committee in the Board schools of that city.\* Yet the oldest of the existing branch Board school libraries of the Leeds system was not established until 1884. In 1894 Voluntary schools began to be treated in the same manner, and now there are thirty-three juvenile libraries in Board schools and six in Voluntary schools. Two of these are open in the evening for issue to the general public, besides doing their daytime work for young scholars. 7,750 volumes are now contained in these school libraries, and the issues for the last completed year were 93,257. Small leaflet catalogues are printed and provided for each school library. The books may be borrowed by children in the fourth and higher standards on the responsibility of the head teacher. The cost of providing the books and maintenance is met out of the Library Rate, but the fittings are provided by the School Board, while the teachers' work is honorary. The Central Free Library and twenty-one branch libraries have also their departments of juvenile literature for children whom the school libraries do not reach.

Plymouth.

The Plymouth Free Public Library Committee have carried on a similar work since 1888. The last report shows that 4,015 volumes were located in fifteen public schools, including one Higher Grade school. At Plymouth the libraries are changed from time to time,

\* Probably this reference was only to branch libraries housed in school buildings, and open for use out of school hours.

which does not appear to be the case at Leeds. The teachers do all the work of the school libraries voluntarily, and the cost of establishing and maintaining them is met out of the Library Rate. The School Board provides storage and stationery.

At Norwich in the year 1889 the Free Library Committee inaugurated a system similar to that at Plymouth, and a sum of £280 was collected to start the scheme. Every public elementary school in the city was provided with a branch belonging to the Central Library—in all there were about 38 branches, containing 3,600 books. Complaint is now made that the books have been much damaged, and in consequence the issue of books has been discontinued.

There seems to be no satisfactory reason for the stoppage of the circulation. Books naturally wear out when constantly used during seven years. The present number of books in the juvenile libraries is 900 fewer than in 1889, and the last completed year's issue was 43,000.

The "Regulations for head teachers" seem to have been well drawn, and it is strongly to be suspected that the lack of funds in the free library treasury and the failure of the School Board to make a grant towards expenses under advice from their clerk that it was not legal to do so, are the reasons of failure. Perhaps also the absolutely honorary character of the teachers' services as school librarians had something to do with the collapse of the system, though it is hard to believe in face of the large number of the issues in one year. A copy of the regulations is appended:—

NORWICH FREE LIBRARY, JUVENILE DEPARTMENT.  
REGULATIONS FOR HEAD TEACHERS.

(1) That this Department be used for the purpose of supplying each child in Standards IV. and upwards in the Elementary Schools of Norwich with suitable books for his or her home reading.

(2) That the Head Teacher of each school availing itself of this Department shall be responsible for the *circulation* of the books, and for the return of the same to the Free Library annually on the second Friday in July, the Committee providing Issue Books for recording the names of the children borrowing books and the numbers of the books so borrowed.

(3) That the day and hour most convenient in each school be fixed by its Head Teacher for the weekly issue and return of books, one book only being allowed at a time to each borrower; and that the number of such issues for each calendar month be regularly supplied to the Librarian at the Free Library.

(4) That each parcel of books sent to the schools from the Free Library shall be accompanied by a written card-catalogue of such books, to be hung in a conspicuous place in the schools for the use of the borrowers and returned with the books to the Library.

(5) That the Head Teacher shall have absolute discretion in withholding books from any child who is wilfully ill-behaved, or careless in the use of the books, and also in cases of infectious illness in the families to which the borrowers belong; and that the Free Library Committee shall have the power to call in any or all books from any school at any time they see reasonable cause for so doing.

J. FREEMAN (Chairman of Library),  
G. WHITE (Chairman of School Board),

August, 1889.

At Darwen, in Lancashire, an excellent work has been accomplished by the Public Free Library committee, through the schools. Mr.



Albert Cawthorne, now librarian of the Whitechapel Public Library, devised the scheme and carried out the first year's arrangements. "The books are granted to the twenty schools in the borough for a period of six months. The total stock of books is 2,720 volumes. These are divided into twenty collections, and arranged in five groups, as follows:—

Group A consists of 4 boxes each containing 100 vols.					
"	B	"	4	"	125 "
"	C	"	4	"	130 "
"	D	"	4	"	150 "
"	E	"	4	"	175 "

The number of scholars (in a school) determines the number of volumes granted. Teachers issue the books. Each group stands four exchanges of six months each, so that a period of two years elapses before the group is returned to the central library. The annual cost (of management) is under £10. The total issues for 1895 were 20,282," [and for the last completed year 20,735 volumes]. The teachers' work is honorary, and the whole cost of the scheme is borne by the Free Library authority.

When a child leaves school he is presented with a catalogue and guarantee form for use at the Central Free Library. In the report of the Education Department for 1895-6, the local Inspector of Schools commended the Darwen scheme to other towns as worthy of wider adoption. Short lists of suitable books for children have also been prepared and circulated.

At Barrow-in-Furness boxes of books are made up and exchanged fortnightly at two board schools. The Walney Board School issued 707 in the last completed twelve months' working. It began operations in November, 1895, and about fifty books are constantly at the school or in the hands of scholars. The vicar makes himself responsible for the cost of delivery and collection of the books sent or returned. The head teacher issues the books and makes periodical returns to the Central Library; he is not paid for this work. In October, 1897, the Roose Board School was made a branch of the library; about seventy books are constantly renewed there. Barrow is a very extensive borough, and some of the schools are very far from the town library.

The Borough of West Ham is now endeavouring to find a solution to the problem of bringing the Public School and Public Library into closer relationship on similar lines. The following circular has been sent out to Head Teachers:—

West Ham Public Libraries, Stratford, E.  
9th December, 1897.

Dear Sir,

The Committee of the West Ham Public Libraries, recognising the importance of creating a love of reading in the minds of the young, cannot conceive of any better plan than that of affiliating to some extent the Libraries with the Board Schools, by which means the whole of the children in the Borough would practically be reached. However, before approaching the School Board or proceeding any further with this important undertaking, they desire to ascertain the opinions of the various head masters and mistresses of schools as to the utility of such a scheme, and to learn if there would be



any difficulty in the care and issue of the books, etc., of which the Committee at present may not be aware.

The scheme, roughly outlined, would be as follows :—

(1) The libraries would at the beginning provide about 200 books to each school, and would undertake to repair or replace them as required.

(2) The libraries would provide a simple system of recording loans of books not requiring any writing or book-keeping.

(3) The libraries would undertake the carriage of books.

(4) The schools would provide cheap simple cupboards or bookcases for the storage of the books.

(5) The schools would arrange for some pupil-teachers or trustworthy scholars to give out the books at stated periods, which should not require above an hour or two each week.

(6) The head masters and mistresses would be responsible, within reasonable limits, for the care of the books. This would not, however, imply any pecuniary responsibility.

(7) The head masters and mistresses would be consulted in the choice of the books and suggestions received from them from time to time.

(8) The Borough Librarian would have the general superintendence and carrying out of the scheme as a whole. This would practically signify a visit or two to each school during the year, and a certain amount of correspondence.

The main idea is to provide each school with 200 books at the beginning, such books to be exchanged periodically with those of other schools. We should send a van round for this purpose at suitable times.

Soliciting the favour of an early and, I trust, encouraging reply,

I am, yours faithfully,

A. COTGREAVE,

(Chief Librarian).

Information from Loughborough is to the effect that the Lough-  
School Board Library for the use of *all* public elementary schools borough  
in the School Board District (which includes the village of Nanpantan  
outside the Free Library district), is housed at the Loughborough Free  
Library and managed by the Free Library staff. The books number  
1,000, and have been catalogued. The cost of maintenance is almost  
met by an annual donation out of Storer's local charity. Books were  
issued 11,518 times in the last completed year.

Suffragan Bishop Beverley writes from Bolton Percy :—

Bolton 1  
(Yorks).

"This is a small village of about 250 inhabitants, with a reading  
room and small library, maintained in the school room, under the Public  
Libraries Act, the rate being at present limited to one half-penny, which  
has so far proved sufficient.

The library is associated with the Village Library of the Yorkshire  
Union of Mechanics' Institutes,\* and thus, in addition to its own books,  
which were originally provided by voluntary subscription, and comprise  
about 200 volumes, it obtains from Leeds a box containing fifty volumes  
once each quarter.

The children of the elementary schools have the free use of these  
books, of which they largely avail themselves. The teachers of the  
Sunday School act as librarians, and give their services gratuitously.  
The costs of maintenance are obtained from the library rate.

All the English systems so far described consist of small libraries  
lent to schools. The Bootle system consists of books from the general  
library stock, lent through a school delivery to individual scholars. Bootle.

\* An excellent institution whose headquarters are at Leeds (Mr. Frank  
Curzon, Secretary), which lends 200 volumes a year to any village library in  
Union for the small subscription of one guinea a year.

Before 1891 children under fifteen were not granted a ticket to borrow from the Bootle Free Library, but in 1891 a "Catalogue of Books for the Young" was published by the committee, and children between the age of eight and of fifteen years were admitted, on compliance with the general rules, with these modifications:—

1. No guarantee for a juvenile borrower will be accepted unless accompanied with the signed consent of a parent or guardian.
2. No book shall be lent to a juvenile borrower except it be entered in the "List of books for the Young," or a supplement thereto.
3. A juvenile borrower may not borrow books after seven o'clock in the evening.

These rules were designed to provide parental co-operation in the choice of books, the exclusion of books calculated to develop "improper precocity" in children, and the crowding of work at the Library counter into the evening hours. The result was a decided success, and six or seven hundred children quickly enrolled their names. About the same time the teachers at the Board Schools obtained a small number of books, which were placed in two Public Elementary schools, to serve as libraries for the scholars. In a year or two the books were so worn that renewal had to be thought of, and the cost of maintenance became a bar to the increase of their number. At this stage Mr. A. J. Miles, headmaster at the Bedford Road School, suggested affiliation of the school as a branch of the Public Library. The Library Committee considered the matter, and adopted the following rules in September, 1894:—

RULES FOR THE SCHOOL DELIVERY IN CONNECTION WITH THE  
BOOTLE FREE PUBLIC LIBRARY.

I. The Head Master of the.....School shall nominate a Librarian for the School Delivery, who must be approved by the Free Library Committee, and who shall

- (1) Keep a supply of guaranty forms, give a copy to any child requiring the same, and collect and forward the filled-up forms to the Library.
- (2) Receive from the Library new borrowers' tickets, and deliver the same to the borrowers when each has duly signed the "School Delivery" signature book.
- (3) Issue to each borrower on Delivery Day a copy of the "Book Card," and when properly filled in collect and forward the Book Cards with the returned books to the Library.
- (4) Receive the exchanged books, book-cards, tickets, and stationery from the Library on each issue day, distribute the books to the School borrowers, and file the book-cards for future reference.
- (5) Keep copies of the rules and catalogues of children's books, and see that they are posted up in the school and easily accessible to teachers and scholars.

II. For the present delivery days shall be.....fortnightly, commencing on....., and issue days the days immediately following delivery days.

III. A week longer than the time stated within the book covers shall be allowed for reading to children borrowing through the school, but otherwise they shall be subject to the general rules of the Library like all other juvenile borrowers.

IV. When a fine becomes due on a book, it will not be renewed or exchanged until the borrower has paid the fine at the Library.

By order of the Committee,

JOHN J. OGLE (Librarian).



<b>BOOTLE FREE PUBLIC LIBRARY.</b>			
<b>BEDFORD ROAD BOARD SCHOOL DELIVERY.</b>			
<b>BOOK CARD.</b>			
<i>Date</i> .....			
<i>Name of Scholar</i> .....			
<i>Number of Book returned</i> .....			
<i>Nos. of not less than ten books wanted, in order of preference.</i>			
<i>For use by Free Library Officials only.</i>			
<i>Book Sent</i> .....			
<i>Date</i> .....			
<i>Assistant's Initials</i> .....			
A WEEK longer than the usual time (marked on the fly-leaf of the book) is allowed for reading.			

The principal advantages of the Bootle rules are :—

1. They provide against the weakening of the general library by the withdrawal for certain periods of portions of the stock to the schools.
2. They do not reserve any of the public books for the sole use of a section of the community.
3. They are applicable without difficulty to any school.
4. They do not disturb the system in operation at the central library, no matter what the system be, nor make any special recording books necessary.
5. They are economical in carrying out.
6. They give a minimum of trouble to the school librarian and relieve him of all financial responsibility.
7. They allow the child to continue to use the library in vacation times, and leave him at the end of his school days an effective borrower at the public library.

The School Board provides a neat covered handcart for the transit of the books between school and library. The teachers take much interest in directing the children's reading, and they are supplied with catalogues to assist them in doing so. From two to three thousand books are available for scholars in the schools.

During the year 1896-7, 2,887 books were circulated through this delivery ; in the preceding year 4,328 had been circulated in the same way. A second school has just acquired the like privilege of becoming a branch delivery.



Besides this, the Committee have just determined to allow teachers in schools to borrow for school uses four books at a time, and to retain them a month without change or renewal. Not more than one of the books is to be a work of fiction. This privilege will open the advantages of the library to non-resident teachers, and be a great boon to all teachers alike. It is believed this will be the first instance of the adoption in Britain of the American system of the teacher's study card.

In many places children are admitted to borrow books from the Public Library, on the recommendation of the Head Teacher of a Public School. This feature is prominent in the following extracts from, or summaries of reports received.

- Colne.  
Oswestry.  
Aston Manor.      Scholars may borrow books on the recommendation of their teachers.
- Llan-  
nwchllyn.      The head mistress of the public elementary school, where the Public Library is located, is allowed to select books for loan to individual children in the school.
- Leyton.      Children may borrow from the Public Library provided they have the consent of the head teacher of their school. The head masters of two local schools have written in high appreciation of the facilities placed in the way of the children.
- Croydon.      Children between twelve and fourteen are admitted to borrow at the Public Library on the guarantee of the head teacher, who is requested to exercise some control over the selection of books by the children. This privilege was obtained on the application of the Croydon Board Teachers' Association. Teachers often come to the library with scholars in small companies, and assist them to choose books.
- Rothwell  
(Kettering).      Books are lent on the responsibility of the head master to children in the two highest standards. The scholars come to read periodicals on the table in the reading-room from six to seven on Friday evenings, a teacher being responsible for their good conduct.
- Birmingham.      Head teachers of public elementary schools are authorised to become guarantors for their scholars on the understanding that the Board or managers of the schools are responsible for loss or damage. In all the lending libraries there is a special juvenile section with separate catalogue.
- Minet  
Library,  
Knatchbull  
Road, S.E.      There is a very successful children's reading-room here for boys and girls between seven and fourteen years of age, recommended for admission by parent, guardian, school-teacher, or other responsible person. The room is open most evenings from 5.30 to 8.30, and during two hours of Saturday afternoon. This boon has been rendered possible chiefly by the additional generosity of Mr. Minet, the founder of the library. There are 881 books, all presented, in the room, and the issue for the last completed year was 29,872. Schoolmasters and schoolmistresses are notified of the existence and work of this institution. Fortnightly meetings are held in the room, and papers read by the children themselves and their friends. The report for 1895-6 mentions that there are 1,965 children now on the books. In the previous year's report the Librarian said, "The experience of the past two years tends to convince me that the children's room is among the most valuable departments of the library: valuable not only to the children at the moment, but also as a training school in which they may learn the appreciation and right use of our other departments for their older years." The last report states, "I have been repeatedly assured by those who have left (having exceeded the age limit), that they will always have a pleasant recollection of the evenings spent in the children's room."
- Newington.      Upon the recommendation of teachers, children are admitted to borrow at the library. A circular calling attention to this privilege has been sent to every boys' and girls' department, together with catalogue lists and forms

of application for borrowers. Teachers often attend with scholars at the library and help them to choose books. In December last 963 tickets had been issued under this arrangement. The scheme was the result of a conference of teachers and others at the Public Library. The work here in connection with the boys' room is very remarkable, but has no direct connection with the public schools. Parties of the best behaved and most regular users are from time to time taken by competent leaders to visit the principal national institutions in London.

Perhaps the most frequent kind of connection between the Public School and Public Library is that of advertisement of the library and its advantages through the schools, and recommendation of the library to the elder scholars by the teachers. For years past the Education Department has urged teachers to make their instructions lead up to an appreciation of art galleries, museums, and public libraries, on the part of their pupils. It is gratifying to find the Department's recommendation so well attended to. The disposition of Public Library Committees to assist the schools may be gathered from the following extracts from and summaries of letters received in answer to enquiries:—

The following circular to head teachers was issued in 1890, but met with scarcely any response. Boys' reading rooms, though not directly connected with the schools, are doing a most valuable work in Manchester. Manchester.

Free Reference Library, King Street, Manchester,  
August, 1890.

Dear Sir,

I am requested by the Public Libraries Committee to inform you that they have recently had under consideration certain proposals for encouraging the habit of systematic reading amongst the pupils of elementary and secondary schools in Manchester.

The Committee believe that much more use might advantageously be made of the Free Libraries than at present is the case, and they desire me to point out some of the facilities offered by the Libraries.

The Free Reference Library, King Street, contains over 90,000 volumes, and is, naturally, a storehouse of knowledge of the utmost importance to both teachers and pupils. It is open from 9 a.m. to 10 p.m. daily, and from 2 to 9 on Sunday.

The lending libraries are six in number, and are situated as follows:—

Deansgate—Near Liverpool Road.	Rochdale Road—Livesey Street.
Hulme—Stretford Road.	Chorlton—Rusholme Road, C.-on-M.
Ancoats—Every Street.	Cheetham—York Street.

They are open from 8.30 a.m. to 9 p.m., except on Saturdays, when the issue of books ceases at 5 p.m. Books are lent for home reading to anyone who obtains the signature of a parliamentary or municipal voter of Manchester or Salford to a form, of which I enclose a copy. This is a form of guarantee to insure the Committee from loss of books. Books are also lent to electors on their own guarantee.

The enclosed "Handbook" contains the bye-laws, as well as general information concerning the Libraries.

The Committee desire to suggest that the masters and mistresses of schools should prepare lists of books suitable for their pupils to read out of school hours. To facilitate the compilation of such lists, in case you adopt the suggestion, the Committee instruct me to send you copies of the catalogues of the lending libraries. A copy of the Hulme Branch Library catalogue is sent herewith. Several other catalogues are in preparation, and will be sent when ready, if desired.

I may add that I shall be happy to receive any hints you may offer with regard to books which, in your opinion, should be added to the libraries.

Yours faithfully,

CHARLES W. SUTTON (Chief Librarian).



- Gosport and Alverstoke. A pamphlet is circulated in the schools entitled, "How to use the Public Library."
- Ashton-under-Lyne. A circular letter has been sent by the Corporation to all the schools, drawing attention to the advantages of the Library for boys and girls between 12 and 16 years of age; also mentioning the benefit which the use of the Library might be to the teaching staff, and asking for suggestions as to new juvenile and educational works for purchase. Catalogues are sent to the head masters for the use of the children.
- Walford. "Teachers have been supplied from time to time with lists of historical tales bearing on special periods of history, special countries, or other topics, The asking for such lists is encouraged."
- Portsmouth. The public librarian conducts parties of scholars round the Library, while commenting on the works of the authors represented; he also is willing to visit schools on Fridays, and talk to the children about books.
- Tynemouth. "On the publication of the Juvenile Catalogue a circular letter was sent round to the various schools in the borough, advising the teachers of the fact, and asking them to bring to the notice of the children the facilities for reading provided at the Public Library. . . . A noticeable increase in the number of young readers of both sexes has since taken place."
- Newcastle-on-Tyne. "A Special Class List on Education is being printed. It will be distributed among teachers in the various schools of the City."
- Reading. "We have a separate department, consisting of a library and reading rooms, for boys and girls. . . . We have just decided to hang up at each elementary school in the borough a printed card giving suitable information respecting our juvenile library and reading room."
- Putney. No less than 95 schoolmasters (teachers?) borrow from the Public Library. They frequently refer to the help they get from the books provided in the library for teaching purposes.
- Camberwell. "Catalogues of the libraries are sent to the elementary schools, and requests made to teachers to . . . explain to the children in the upper standards the advantages to be gained by using the libraries."
- Runcorn. "We have tried to get the teachers interested in the library, and to distribute forms of application to their pupils, with fairly good results; also a lecture on 'Boys' Books' has been delivered to a juvenile audience."
- Cambridge. A circular letter was sent round to the schools so long ago as October, 1883, displaying the advantages offered to teachers and elder scholars by the Public Library.
- Leyton. Type-written lists of books for boys give references to historical works to be read with stories such as Henty's.

That the connection between the Library and the School is not necessarily and solely for the benefit of the scholars, the use of Birkenhead serves to remind us. Here books of a strictly educational character are lent at times to a Central Board School for the "Pupil Teachers' Classes of Instruction," and circulated in the classes.

Bootle grants a special privilege card to teachers as described above.

Attempts to interest the Public Library authorities in the service of books for schools have sometimes not proved successful, as the following reports show:

- Kidderminster. A scheme for supplying books to the scholars in the schools was devised by the librarian and laid before the committee. It proposed to absorb a number of small libraries now provided by the Board in the schools for loan to attentive and good scholars only, and either to serve the scholars direct from the library or by a service of frequently changed boxes of books to be issued in the schools by the teachers. The School Board was willing to hand over the books, but the Library Committee after consideration did not think the time was ripe for the change.
- Pontypridd. The master of a large school has endeavoured to form a school library, which has not been a success, and "he wishes very much that some arrange-



ment could be made whereby his pupils could obtain books from the Central Free Library." Lack of funds is alleged as not allowing developments in the Public Library to meet scholars' needs.

"The Town Clerk of the Borough had specially referred to him the question as to the legality of supplying books to the elementary schools for use of the children being educated therein, and his emphatic decision was that it was quite illegal for the library authority to set apart any portion of the books in a Public Library for the sole use for the time being of any particular class, or to devote any sum of money for that purpose."

Folkestone seems to be the only place where any reason, other than lack of funds, has been urged against the undertaking to supply libraries to the schools. It will be noticed, however, that whatever force there be in the opinion of the illegality of supplying libraries to schools, there can be no question of the legality of lending books to scholars through the schools by a branch delivery system on the principle adopted at Bootle. The financial side of the matter under consideration will be discussed at the close of this report; meanwhile, it is interesting to note that at Cardiff the provision of branch libraries for the schools has not yet been undertaken in consequence of the limited funds from the maximum library rate of one penny in the pound; but the Public Library Committee are moving to obtain legal powers to exceed the present rate limit. In the meantime, one of the most effective of methods for connecting school and library has been inaugurated at the Cardiff Public Libraries.

This cannot be more authoritatively described than in the words of Mr. John Ballinger, the librarian of the borough, in excerpts from a paper read to the Library Association of the United Kingdom, at the 20th annual meeting, held in London last year.

#### THE PUBLIC LIBRARIES AND THE SCHOOLS: AN EXPERIMENT.

(Extracts from a paper read to the Library Association of the United Kingdom at the twentieth annual meeting, 1897.)

"The completion of the Public Library Central Buildings in Cardiff, where we have ample room for all our work, enabled me in the autumn of 1896 to put before the Public Libraries Committee various suggestions for developing the work of the library upon lines which had long been thought out by me, but which want of the necessary space and conveniences prevented us from putting into operation.

After carefully considering this report, the committee decided to confer with the head teachers of the Board and Voluntary Schools with a view to arranging for parties from each of the schools to visit the library, the details of the scheme being left for arrangement between the librarian and the head teachers.

The first step was a conference between the librarian and the head teachers of the elementary schools as to the possibility of using the library with advantage for the work of teaching. A plan was carefully thought out, which ultimately shaped itself into an arrangement whereby the scholars in and above the fourth standard of all the elementary schools in the town should visit the library at least once in the year, and receive an illustrated lesson upon some definite subject. It was arranged that the librarian should give the same lesson to each school, the subject for the first year being "The History of a Book," and the lesson being repeated once in each week for boys, and once in each week for girls, until the whole of the school had been served. Any other subject might be substituted for this if the teacher desired; but in that case the lesson was to be given by the head teacher or one of his assistants—the books of course being got together and exhibited by the



librarian and his staff. As a matter of fact, the same lesson was given to all the parties from the elementary schools.

The preliminaries having been arranged, the School Board was next approached jointly by the Teachers' Association and the Public Libraries Committee, and asked to approve the scheme; and H.M. Inspector of Schools was at the same time communicated with. Both the School Board and the Inspector at once cordially agreed to the proposal, and a time table was drawn up and printed for all the Board Schools.

The lessons to the children from the Board Schools occupied four months, and before they were completed communications were entered into between the librarian and the teachers of the Voluntary schools, and arrangements made for them to send parties in accordance with a time table drawn up jointly. In this way the whole of the elementary schools of the town were covered.

It will be remembered that the visits were confined to children in and above the fourth standard. By this arrangement the standard of exemption from school attendance is included, and by carrying out this plan year after year with one visit per annum from each boys' and girls' school, we shall in process of time have shown the library at least once to almost every child educated in the elementary schools. It is not necessary to enlarge to you upon the importance of this. You probably know more than I could ever hope to tell you about the necessity of teaching people to read intelligently—a need almost as great as the necessity for supplying them with books. To secure children at such an impressionable age, and to show them the inside of a Public Library, is to introduce them in most cases to an entirely new world, and to open up to their minds a totally new view of the value of reading.

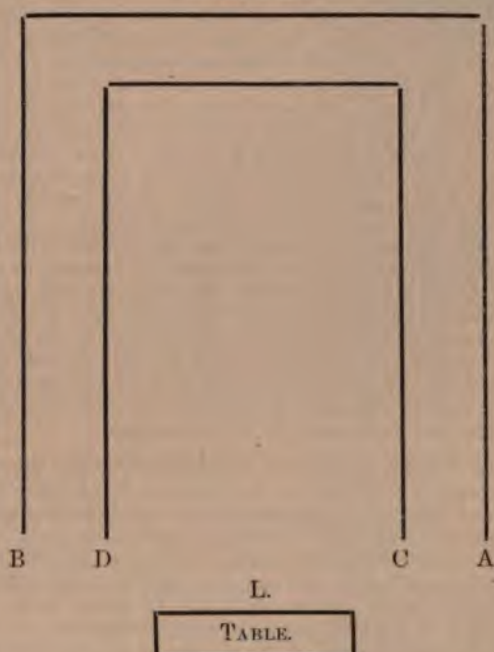
I said that we took as our subject for last year the history of a book, but that probably does not convey any idea of the lines upon which we proceeded. We didn't tell the children we were going to give them a lesson on the history of a book, or that we were going to give them a lesson at all. We started by saying that we were going to show them different kinds of books, and then beginning with a clay tablet, of which we had one genuine specimen (Babylonian) and one cast (Assyrian) made from an original in the British Museum, we proceeded to show how the book and the art of writing and reading had gradually developed. We explained to them the papyrus books of ancient Egypt, using as illustrations the beautiful reproductions of papyri published by the trustees of the British Museum. We explained to them also that there had been different kinds of letters used to denote sounds, showing them the difference between cuneiform writing and the picture writing of Egypt. We also dealt with books written upon vellum, using by way of illustration various MSS. and deeds belonging to the library. Passing from the written to the printed book, we explained a few elementary facts about the early history of printing and about early printing in England, using as illustrations four or five books printed before the year 1500, which we happen to possess. Having introduced the subject of printing, we passed lightly over the interval between the early printed book and the modern book, explaining that the former had no title page, no head lines, no pagination, no printer's name, no place of printing, and that the capital letters were omitted for the purpose of being put in by hand, and we showed them specimens of such capitals and also of books in which the capitals had never been inserted. To lead up from this point to the magnificent books of the present day was to give the children an object lesson in human progress which was not only instructive, but delightful. We showed them by the way the facsimile examples of the Horn Book from Mr. Tuer's interesting monograph on that subject. We also showed them books printed in Japan and other countries, books for the blind and similar byways of the book world; and finally we exhibited as examples of the great position to which the art of bookmaking had now attained, such books as the "*Hertfordshire Pomona*," Hinkins's "*Musical Instruments*," Gould's "*Birds of Great Britain*," etc.

The parties of children were limited to forty, the seating capacity of the room, and they were so arranged that every individual child was shown each object used to illustrate the lesson. As the method of arranging the children was the subject of considerable experiment I propose to give you a diagram of what ultimately proved to be the best plan. Part of the children were

seated on three sides of a square round the three walls of the room, the remainder being seated in the same way on three sides of a smaller inner square. Every party of children was accompanied by at least two teachers, who, with one of the library assistants, helped to show the various objects.

In exhibiting we started two persons at the same time, one at the point marked A for the outer square, and one at the point marked D for the inner square. The outer exhibitor finished at B, and then followed on from D round to C. The inner one finished at C and then followed from A round

DIAGRAM.



the outer square to B. In this way all the children were kept constantly engaged, and the exhibitors were enabled to go round without obstructing one another. The librarian, or whoever gave the lesson, took up his position at the spot marked L, and on a table behind him were the various items used for illustration, which he handed to the exhibitors as he proceeded.

The attempt to put the Library in touch with the schools was not, however, confined to the elementary schools. The higher grade school, the intermediate schools, and the pupil teachers' school, and any other similar schools, without distinction of creed or party, were also included in the scheme, and parties from each of them visited the Library. In some cases the lesson given to the elementary schools was given in a more advanced form to the scholars from the higher schools, while in others a special subject, selected by the teachers, was taken by one of the teachers. In one case, for instance, English history of the Tudor period was taken, and everything bearing upon that period was put together and shown to the scholars.

It may, perhaps, be of interest to mention that on more than one occasion, when parties of working men were visiting the Library, they asked to be shown various things which they had heard their children talking about, such as a clay tablet, a horn book, an early printed book, or the great seal of Queen Elizabeth. I merely mention this fact to show you the far-reaching effects of our lessons to children.

There was considerable advantage in having the visitors in small parties—forty should be the outside number, and thirty is better. With such a number it is possible to show every item fully to each person, and the ex-



planations given need not be too formal. The time chosen by the teachers for the children's visits was 2.45 p.m., and the lesson lasted about an hour and a half. At first I made the mistake of trying to explain too many things. Composition papers, written by the scholars and sent to me by the teachers, enabled me to detect this fault, and the omission of some specimens followed, with satisfactory results. Many of the essays written by the children would have done credit to an undergraduate, and in nearly every case I found that the scholars had grasped the main facts of my story.

After giving thirty-nine lessons to a total of about 1,600 children, between January and July of the present year, I say, without hesitation, that nothing I have ever been able to do in the whole course of my life has been so full of satisfaction as the work which I have just attempted to describe, and I am looking forward with great pleasure to the renewal of the lessons, which will begin next week. I have just heard that at a meeting of the elementary teachers, when the question of the renewal of the lessons was under consideration, all the teachers were of opinion that a most valuable and pleasant supplement to the ordinary school lessons had been introduced, and they unanimously agree to recommend the renewal of the course. From my own standpoint I can only say that the children behaved in a most exemplary manner and that the teachers entered into the scheme with an enthusiasm which meant success; and also that the teachers selected to accompany the classes to the Library, almost without exception entered heartily into the spirit of the thing, and assisted in every way to make the work of the librarian as pleasant and profitable as possible. The subject of the librarian's lesson for the next term will be "Bridges," and for the succeeding year a third subject will probably be taken. By that time all the children included in the first year's parties will have left school, and it will be possible to revert to the first lesson, and so go through the course again.

In conclusion, I would say that, so far as I can foresee, there is every probability of the work which we have now taken in hand being continued from year to year, and becoming a regular part of the library system, and I am strongly inclined to think that by adopting some such plans for placing the library more in touch with the educational system of the country a great step forward will have been taken, and not only shall we make the library a part of the educational system, but we shall also be doing, in the best possible way, our own work of teaching people to read intelligently, so that they may get the greatest benefit from the books purchased with the money which they provide."

The Cardiff experiment has aroused the greatest interest in all quarters, and its success has led to the careful consideration and the adoption of similar methods elsewhere. The following reports bear principally on this matter.

Leyton.

A similar method to that employed at Cardiff for bringing the Public Schools and the Public Library into close touch, has just been inaugurated at Leyton. The Librarian, Mr. Z. Moon, addressed a body of children from the Public Schools on January 21st last, on the "History, Uses, and Values of Books." Her Majesty's Inspector of Schools for the locality was present on the occasion, and in his remarks at the conclusion of the address urged the Library Committee to send a selection of books to the schools for circulation among the scholars.

Great  
armouth.

"The teachers are urged from time to time to bring the advantages of the library before the children, and they themselves (the teachers) are greatly interested in our work. We intend to inaugurate a series of lectures on books in the library to be given monthly; already several townsmen have offered prizes for the best essays written by the children, and we hope by this means to increase the desire for reading and study."

West-  
borough.

"The question of the Librarian attending at the schools occasionally and giving talks on the books is under the consideration of the committee." Copies of the catalogue of the Juvenile Lending Library are sent to head masters."

A list of public libraries in England and Wales which have special provision for children, though not necessarily through the public school, will conclude what there is to report of actual accomplishment in this country.

*Arlecdon and Frizington (Cumb.)	*Newington
†*Ashton-under-Lyne	*Poplar
†Aston Manor	Putney (12)
†Barrow-in-Furness	†*St. George, Hanover Square
†Birkenhead	†*St. Leonard, Shoreditch
†*Birmingham	*St. Saviour, Southwark
Bolton Percy (Yorks.)	Streatham (12)
Brentford	Wandsworth
†Bristol	Westminster
Burton-on-Trent (16)	†Whitechapel
*Cambridge	†*Loughborough
†*Cardiff	†*Manchester
†Carlisle	Middle Claydon (Bucks)
Cheltenham	Middlesborough
Chiswick	Middlewich
Cleator Moor (Cumb.) (14)	Newark-on-Trent
*Colne	†Newcastle-on-Tyne
*Croydon	Newport (Mon.)
Darlington (12)	*North Shields
*Darwen	Northwich
†*Derby	Norwich
†Dewsbury	†Nottingham
Ealing	Oldham
Falmouth	*Oswestry
*Gateshead	Penarth
*Gosport and Alverstoke (Hants.)	†Peterborough
Gravesend (14)	*Plymouth
*Great Yarmouth	Pontypridd
Halifax	†Portsmouth
Handsworth	Ramsgate
Harleaden	†*Reading
†Hull	*Rothwell (Northamptonshire)
Kendal	Rugby (14)
Kilburn (14)	*Runcorn
Kingston-on-Thames (14)	†*St. Helens
*Lancaster	St. Ives (Cornwall) (12)
Leamington (14)	Sale and Ashton-on-Mersey
†*Leeds	Smethwick
†Leek (14)	Stafford (12)
†Leyton	Stalybridge
Lincoln (13)	Sunderland
†Liverpool	Todmorden (13)
London	†Tottenham
*Bermundsey	Walsall (14)
*Camberwell	Walthamstow (15)
†— Minet Library	*Watford
*Chelsea	Warrington (12)
Clapham	Warwick (14)
*Clerkenwell	West Bromwich
†Hammersmith	†*West Ham
Hampstead	Widnes (12)
Holborn (12)	*Willesden Green
*Lambeth	Wolverhampton
Lewisham (14)	Wrexham

\* At these places the librarians make known the work of the public library through the teachers in the public schools.

† Signifies that a catalogue of children's books is published.

† That children's reading rooms are provided.

The figure after the name is the age of admission of children to the use of the library.

There remains to be said a word or two about Scotland and Ireland. These parts of the United Kingdom lying outside the field of the English Education Department, are not treated here; but mention should be made of the following facts.

There is a large juvenile library at the Edinburgh Public Library, and juvenile sections in its two branches. The circulation thereat is about 6,000 volumes a month. The school authorities have established libraries in the schools.

At Dundee special attention is paid to providing suitable juvenile literature, and large use made thereof. Reserve tables for boys and girls are provided in the reading rooms, but nothing done directly through the schools.

At Aberdeen there is a special section for children in the public library, and a printed catalogue is being prepared of its 3,000 volumes.

At Paisley the subject of children's needs is likely to be brought under the consideration of the library committee.

The masters in some of the schools at Ayr "from time to time bring the library before the scholars." A juvenile section is much used.

The public libraries at Dublin and at Cork have not yet commenced specially to provide for scholars in the schools, but at Belfast there has been a juvenile department of the public library for nine years past, and an excellent children's catalogue is published.

#### AMERICAN PUBLIC LIBRARIES.

The work accomplished in the United Kingdom, such as it is, has been a natural and spontaneous one, but the subject of the relations of school and library can probably be better studied in the United States than at home. The field of the present inquiry was therefore extended to include representative public libraries in most of the United States. A letter asking what had been done to bring about a close connection between the public schools and the public libraries was addressed to seventy or eighty representative American librarians, and nearly half of them returned comprehensive replies. It is proposed here to give a summary of written and printed matter furnished from six or seven of the libraries most representative from our point of view, and then to add additional information in briefer compass about the remaining libraries before summing up the results of the enquiry as a whole.

Before commencing it is necessary to warn the reader of the value of various American educational terms, that they may be mentally translated into their British equivalents.

The primary departments or grades in United States Schools contain children from about six to ten years of age, the grammar departments or grades those of 10 to 14. There are usually nine grades, each grade corresponding roughly to a year of a child's studies or life. To have passed the seventh standard is about the same as to have "graduated" in the grammar school. The "high schools" are for pupils from 14 or 15 to 18 years of age.



A school superintendent is the chief executive officer and adviser of the local educational authority. He combines to some extent the duties of a minister of public instruction and chief inspector of schools, a licenser of teaching, and a professor of pedagogy. There is no office exactly equivalent to his out of America.

Sir J. G. Fitch says:—

"At his central bureau are often to be found a good professional library, for lending and reference, for the use of teachers [and] specimen juvenile libraries suited to different classes of schools."

FREE PUBLIC LIBRARY, WORCESTER, MASSACHUSETTS, U.S.A.

Report of Samuel S. Green, Librarian.

"Population of Worcester a little over 100,000. Annual expenditures of the library about \$35,000. Number of volumes in the library, 114,325.

The work of bringing about a close connection between this library and the public and private schools of Worcester was begun about twenty-five years ago. This library was a pioneer in doing this kind of work. In the winter and spring of 1879-80 especial efforts were made to bring about a closer connection with . . . schools of a lower grade than the High Schools. The last-named class of schools was already making a large use of the library; the problem was to bring about as large a use by schools of elementary grades.

A consultation was held by the Superintendent of Schools, a member of the School Committee, the Principal of a Massachusetts Normal School, and the Librarian of the Public Library, and it was decided how library books might be used to advantage in schools. Then the teachers were called together, the plans explained to them, and their co-operation asked. Many became interested at once, and a large number before long. The movement was encouraged by the school authorities, and soon became general.

The practical arrangements for doing the desired work are partially as follows:—

Every teacher is allowed two special cards. By means of one of these he (or she) may take out six books to be used in preparing for school exercises or for serious reading for study in any direction. Only one novel at a time (for purpose of recreation) can be drawn out by the use of this card.

By means of the other card twelve books may be taken out, to be used by the teacher in any way he pleases for the benefit of his scholars, either in the schoolroom or at their homes. A larger number of books can be had if needed.

The books are taken to the schoolroom and there displayed. The children have a chance to rummage among them and become interested in good books, for particular care is taken that suitable books only are sent to a school.

The books given out on the two cards can be kept two weeks, and, by sending word, renewed for two weeks additional. Often they can be kept for a longer time by especial arrangement.

The books given to children by means of the cards which teachers hold for their benefit are additional to those which they take out on parents' cards or on a special card issued by this Library to persons under fifteen years of age, in the discretion of the Librarian (or the persons to whom he may relegate his authority). These are often issued at the request of parents and teachers. They are used in large numbers, and attendants in the library are directed to be very particular to see that books given out on children's cards (which may be readily distinguished from those issued to grown-up persons by their colour) are suitable for their users.

Two thousand books are in use under the supervision of teachers in the elementary schools of Worcester every day in the colder weather.

A waggon, under the control of the School Department of the City, is sent to every schoolhouse here once in two weeks to carry books which have been selected from numbers on cards handed in, or sent by mail, beforehand, and to bring back to the Library such books as teachers wish to return.

In doing work in connection with schools, it is well to buy many duplicates of the best books that are in demand by pupils.

On a few occasions the Library has bought twenty or thirty duplicates, so that every scholar in a class might have a copy in studying some literary classic. The plan was discontinued because it was deemed the duty of the School Board to supply books for the purpose specified, on the ground that that Board is required by the laws of Massachusetts to furnish text books to scholars.

The books sent to schoolrooms are used in a variety of ways. In elementary schools they are used for collateral reading in studying geography, history, natural science, and other studies. A book written in particularly good English is sometimes substituted temporarily for the usual reading book. A scholar who has got his lessons is allowed to read one of the books, in his seat. Sometimes pupils are required to read a chapter or book, and then state what the book is about, or his impressions of it, orally or in writing.

Materials for compositions are often found in the Library books. Books are frequently charged to scholars by teachers to take home, overnight, for a day or two, or for a week. When taken home it is found that they are frequently read by older brothers and sisters and other inmates of the families of the children.

The library tried once the experiment of putting a small library in each of three schoolrooms, representing as many grades, of a grammar school, and allowing it to remain there a term.

The plan was to change the library as the children became familiar with the books which had been sent to the school.

The experiment worked admirably.

Geography has been taught in one of the city schools for the last ten years largely by lantern slides. Photographs to be used in making slides are often made by the teacher of that school from illustrations of places, occupations of inhabitants, and groups of persons in books belonging to the library, relating to foreign countries. The library has skylights and a dark closet to be used by amateur or professional photographers.

From one school situated near the library building squads of fifteen scholars, under a leader, were sent to the library in school hours to look at books, which had been selected to illustrate some study, under the guidance of officers of the library, and to learn how to get information from books by the use of indexes, tables of contents, page headings, etc., and how to use dictionaries, encyclopædias, biographical dictionaries, etc.

Classes from the elementary as well as high schools are not infrequently brought to the library building to see matter illustrative of school work.

Elaborate exhibitions for the benefit of pupils are held at the library.

Thus when scholars in the elementary schools have, in the course on American history, finished studying about the Civil War, which began in 1861, they are invited to come to the library building to see pictures illustrative of that war.

One hundred photographs taken from bridges, houses, roads, battlefields (some before the dead had been removed), and other places and objects rendered interesting from their connection with the war, are hung upon the walls of a hall.

To these are added a numerous collection of plates, by Forbes, illustrating camp-life during the war; a set of Confederate etchings and other pictures.

The pupils come to the exhibition after the close of school in the afternoon, that is to say, between 4 and 6 o'clock.

The principals of the different grammar schools, having been notified that the exhibition is open, invite such of the scholars as wish, to attend it. They come when they please, and it is kept open while interest in it continues. The memories of pupils are full of names of places and battles and they get a great deal of definite information in looking at the pictures.

Last winter there was an exhibition consisting of George Catlin's coloured



plates, illustrative of life among the North American Indians, Moran's beautiful representations of scenery in the Yellowstone Park, a collection of chromolithographs illustrative of features in physical geography, and Trouvelot's representations of the planets, comets, etc., as they appear when seen through the telescope.

The Superintendent of Schools arranged to have such pupils come as chose from all the schools. The teachers registered their names at the Superintendent's office, placing after them such dates as they preferred. Every day the librarian was informed by telephone what school would attend. The scholars came to this exhibition accompanied by some of their teachers.

The librarian gave the children a talk upon the pictures, and the exhibition was regarded as very interesting and instructive. It was very largely attended.

It will be noticed that in doing the work described in this paper, teachers and children are brought into close personal relations with library officers and thus have whatever advantage comes from unrestricted intercourse with cultivated men and women who have a special knowledge of books, which they are anxious to impart."

CITY LIBRARY ASSOCIATION, SPRINGFIELD, MASSACHUSETTS.

The Annual Report, May, 1891, states that:—

"We provide works on the principles of education and on the theory and art of teaching for the use of instructors. We supply in this way the benefit of continued normal instruction to our teachers. We have the writings of standard authors like Richter and Rosseau and Froebel and Arnold and Spencer and Bain and Hopkins and Wayland and Horace Mann. We have such publications as Barnard's *Journal of Education* and volumes like the annual reports of the American Institute of Instruction; we also supply the latest and best works of a practical character as they come from the press. . . . We furnish a large number of volumes of the best books for reading directly illustrative of the various studies pursued in the schools, and we supply also the means for collateral and general study, both for teachers and pupils.

Each of our teachers is furnished with a personal card and with a card also which entitles the holder to have out six books for use in the school. This arrangement provides for about 800 volumes of illustrative books, which can be in constant use in the various classes.

We provide also a juvenile catalogue of the best books, which is placed in each of the schools, and a more complete card catalogue of juvenile books is provided for use in the library.

We make arrangements also for the use of encyclopædias, dictionaries, maps, engravings, collections of historical portraits, etc. Such works as Piranesi on Roman antiquities, and Le Croix's magnificent works on the Middle Ages, Duruy's histories of Greece and Rome, Napoleon's, Binion's and Ebers's elaborate works on Egypt, Wilson's and Audubon's Birds, Kingsley's natural history, and everything which the library contains which can illustrate or give reality to reading or study are placed at the disposal of teachers, and they are encouraged to bring classes to the library as they have opportunity for the purposes of special topical study.

Moreover, the teachers are invited to furnish to the librarian in advance the topics they propose to give to their classes, and we engage in such cases to select for their use books illustrating these topics, and to place them at the disposal of the pupils for consultation and study, out of their school hours. This use of the library is exceedingly valuable, especially for the more advanced pupils.

The benefit of all this use of the library in connection with the schools is well expressed by one of the teachers. He says:—"The books thus supplied in history, geography and other departments of



school study are of inestimable value, stimulating and developing in the pupils a taste for solid literature, and enabling the teachers to give a broader education than could possibly be done by the use of text-books and oral instruction alone." Indeed, he adds that, "after having been accustomed for a time to this method he should hardly know what to do with his school if he could not avail himself of the opportunities for this supplementary use of books in connection with the text-books in use."

I will only add further on this subject, that this use of books for school purposes results not only in the improvement of the work of the schools, but also in giving the pupils familiarity with the use of books and in cultivating habits of investigation, which will be likely to lead them to prosecute their studies after their school life ends."

A monthly bulletin is published containing many lists of books related to school studies, and besides these a catalogue of books for young people in history, biography and travel.

Again and again in the annual reports is the importance of this work insisted on, and the Superintendent of Schools and the teachers are quoted in commendation of the work of the Public Library as ancillary to the schools.

#### THE PUBLIC LIBRARY, DETROIT.

"In 1887 an arrangement was entered into between the Board of Education and the Library Commission, by virtue of which the latter undertook to supply duplicate copies of certain library books for the exclusive use of pupils in the public schools. The Board of Education on its part agreed to become responsible for the proper usage and accounting for these books and to provide the means of transportation between the library and the school houses. That arrangement is still in force, and has been found to work satisfactorily. The experiment was begun in a small way, with about 600 books supplied to the high school grades. It has been extended from time to time—first to the seventh and eighth grades, then to the fifth and sixth, and finally to the fourth. . . . There are at the present time over 7,000 volumes in the school circulating libraries. These books were selected by a committee of school principals.

The books in the high school grades were chosen with reference to the school work. They are not designed for miscellaneous reading, but are used for supplemental reading and study in connection with class work. They are kept at the school to be studied in class, or are drawn out over one day for home study. . . .

The number of books for the high school grades (March 1st, 1896) is 2,577. Of many of these there are only one or two copies. Of others there are numerous copies" (*e.g.*, there are 40 copies of Underwood's *Life of Longfellow*, 36 of Doyle's *English Colonies in America*, 25 of Bryce's *American Commonwealth*).

The first extension to grammar grades took place in March, 1889; the latest in September, 1895. "The books now go to 52 grade schools. . . . The number of books assigned to each (March 1st, 1896) is fourth grade, 1,507; fifth and sixth, 1,772; seventh and eighth, 1,187; making a total of 4,466." There are now (December, 1897) 500 more books in the schools.

There are 80 boxes for transportation, and the books are changed five times during the school year of 40 weeks.

"When returned to the library the books are changed about so that a school is not likely to get any of the same books back again oftener than once in two or three years, and as the pupils are constantly changing from one grade to another a book does not come to the hands of a child a second time. If requests come from teachers with reference to the assignment of certain books they are complied with."

"The books selected for these school circulating libraries are not intended to be used in connection with school studies, though some of them may be and are so used. The intention was to choose good books which a child

would be likely to read and enjoy, with a view to cultivating the habit of reading by putting into the hands of the child something outside his school routine, which would be attractive and profitable to him. In short, to give every child in the public schools some acquaintance with good literature. These books are in charge of the principal at each school, and are given out for home reading under very simple regulations. In very many instances they are read by other members of the family, beside the pupil to whom loaned."

A list of books supplied gives:—

Twenty works to grade the fourth,

Thirty-nine works to grades five and six,

Forty-three works to grades seven and eight,

and the selection of works is excellent, including such authors as Alcott, Burnett, 'Carroll,' Craik, Cooper, Coffin, Dickens, Kipling, Farrar, Henty, Hughes, McCook, Wiggin, Ruskin, Stockton and Wood."

#### MILWAUKEE PUBLIC LIBRARY.

The present librarian was formerly superintendent librarian of schools. "In 1888 the present system of issuing books to the school children was begun." "Miss Stearns, the superintendent of the circulating department, visits a school and interests the teachers of the third grade and upwards in the idea of placing good books in the hands of their pupils. The teachers then give a library card to each child. The Library urged the teachers not to sign the guarantee card themselves, but to have this done by the parents. This gains the consent of the parents to the extra reading of the child, and relieves the teachers of responsibility; and, at the same time, it tends to develop an interest in the child and his doings at his home. The cards being issued, the teacher goes to the library, and, being admitted to the shelves, selects books enough to go round her class. Of course the excellence of the selection as to the grade of books and their suitability to the children varies with the character of the teacher. The library attempts some assistance by publishing numerous lists of good books for young folks." (Among these are 'Picture books for very little children,' 'Good books for boys and girls'—about 200 volumes—and the following, prepared by Miss Lutie E. Stearns: 'Memorial Day,' 'Christmas Day,' 'Thanksgiving Day.' There is also a beautiful catalogue of Books for Young People in the Public Library (62pp. 8vo.), prepared by a former librarian, Miss West, at the request of a former superintendent of schools, Mr. Anderson.)

"The books selected by the teacher are placed in well-made boxes 14 by 20 by 12 inches; these boxes are strengthened on the outside all round the top and bottom, and are furnished with strong hinges and hasps, and with padlocks for fastening . . . they are then sent by the library to the teacher at her school." A record is made of these loans at the library, and a register forwarded with the books, in which the teacher records the use made of the books. They are changed after eight weeks. Pictures from disused journals are also pasted on sheets, and portfolios of them lent to schools—fifteen or twenty minutes per week being allowed by the teachers to the children to handle and enjoy them. "The great success of this work is due to the earnest and enthusiastic labour of Miss West and her assistant, Miss Stearns.

"In 1888, 2,235 books were given out 6,728 times. In 1894, 14,080 books were given out 42,863 times, by 153 teachers in 36 public schools, one parochial school, and one Sunday school. In 1897, 22,955 books were issued 87,631 times."

#### PUBLIC LIBRARY, ST. LOUIS.

Founded in 1865 by the Public School Library Society, this library was turned over to the Board of Public Schools in 1869. The reference room and reading room were made free in 1874, and in 1894 the institution became the Public Library, to be supported by a tax of 1-5 of a mill, on all taxable property in the city. The income from this is £60,000 and increasing.

"We have always endeavoured," says the librarian, "to make the library



serviceable in the schools—to make it, in fact, what it ought to be, an essential supplement to the public school system. Until three years ago the subscription fee was an insuperable obstacle. Now the only difficulty we have to encounter is indifference on the part of the teachers.”

Last autumn, in conference with the principals of schools, lists of books for the first four grades were drawn up. To each school four sets of books, thirty in a set, have been sent. A lady is in charge of the juvenile department, and visits the schools to learn how the books are used. The superintendent of schools is very favourable to this work. A magazine, comparable in appearance to our sixpenny English magazines, is published at the library as its official organ; this is a valuable auxiliary to the educational work of the library. A marked copy of Sargent’s “Reading for the Young,” checked to indicate what is on the shelves, is supplied to schools. A special room for children has been opened, and a striking illustrated advertisement of the room and its uses appeared in the “St. Louis Republic” for 19th December last. The “St. Louis Public Library Magazine” for December, 1897, contains a paper by the librarian, entitled “Books and Text-books: The Library as a Factor in Education,” in which his views are stated at length. The extreme views herein advocated are summed up at the close.

“Let, then, lesson-books and lesson-hearers depart and reading-books and teachers come in.”

The school use in the circulating department for the year ending April 30, 1896, was 5,917.

#### CLEVELAND PUBLIC LIBRARY.

“The co-operation of the library with the schools in Cleveland practically began in 1884, with the issue of teachers’ cards, entitling the holder to draw five books at a time. Some three or four years later came the next important step, the issuing of books to the schools in sets of from twenty to fifty, to be re-issued to the pupils; the results of this plan proved so satisfactory to the teachers, in spite of the responsibility for the books which it entailed, that almost from the beginning the demand for books for the schools has been greater than the library could meet. The best books are duplicated largely for this use; for instance, the shelf list shows 178 copies of ‘Little Women,’ and several hundred volumes of Pratt’s ‘American History’ stories. . . . In January, 1896, the Central High School and the library joined hands in establishing a branch library for the use of the school. The school furnished the room and the greater number of the books, while one of the regular assistants of the library has charge of the work, which is done according to our regular methods. This branch has so grown in importance that it now contains 3,500 volumes belonging to the school, and about 1,000 more loaned from the library; each day, while school is in session, books are sent out from the main library to fill any temporary demand. The reports show an average daily reference attendance of over 225 throughout the past term, and an average daily issue of 115 books for home use. The reading lists which the high school has published for each grade, with helpful suggestions about reading, have done much to guide the pupils in their selection of books.

The normal school is looking more and more to the library as a fruitful resource. . . .

The teachers’ reading room, equipped with the leading school journals and a reference library of several hundred pedagogical works, has been moved from the school headquarters, . . . into the alcove of the library, which contains the books on education, and this has tended to bring the teachers into closer touch with the library. . . .

A plan of organising reading committees of the teachers best qualified to pass judgment on every juvenile book put into the library, has the hearty support of the school authorities, and the first steps have been taken toward putting it into operation.”

A Library League, with a simple pledge against careless handling of books, and in favour of interesting others in the love of them, has been formed by Mr. W. H. Brett, the librarian, and some thousands of children have been enrolled as members. The teachers in schools have helped to make the League and its pledge widely known.



## HARTFORD PUBLIC LIBRARY.

The principal of a school began to borrow ten or twelve books at a time, for use of classes in the geography of the United States, in October, 1884. In 1889, classes in other schools began to borrow for like purposes. Between November, 1890, and June, 1891, 1,000 volumes were charged on school cards.

"During the summer before we opened as a free library, we printed a classified author-list for children in a pamphlet of 93 pages. It began with a friendly talk on reading, and, after the books on the history of a country, gave a list of stories or biography illustrating it. . . .

I have been in the habit for several years of spending an afternoon in the school hall, talking with the boys and girls about the lists of books that they read which they prepare for their teachers. They are asked to give, besides the titles, their reasons for liking their favourites, and what characters they have found in stories who they wish were their friends." (Prizes are given for the best account of a book read during the year.) Copies of lists on out-of-door books and vacation reading in history are sent to one school for distribution before the summer holidays; Christmas stories and poems before the Christmas holidays.

The course of study in the schools in 1894 included debates, and boys and girls spent much time at the public library looking up matter for these debates. "The principals of the schools have asked for 50 copies each of school editions of Burroughs' 'Birds and Bees,' 'Robinson Crusoe' [and many other standard children's books]. The principals at their meetings arrange which school is to have certain books for the next month." At one time, the principals asked that during term time only one book a week should be lent to school children. This rule was adopted to counteract excessive reading and greatly reduced the circulation among children.

"Teachers may take out as many books at a time for school work as they please, but must return or present them for renewal at the end of a fortnight." "The teachers often send to us for 50 books at a time."

"The teachers have aided in every way our efforts to make the library a part of the school system."

"One of the school principals has been a member of our Board of Directors for several years, and his suggestions are always practical and useful. An intimate personal relation between the library staff and pupils is encouraged by the teachers, and invitations to visit schools or listen to debates are often sent to the library."

## UTICA PUBLIC LIBRARY, N.Y.

Courses of reading are published for the schools. "The first course is for children in the four highest grades of the grammar schools, and the books in this list are read and discussed in the class-room under the guidance of the teacher, the purpose being to lead the children into methods of careful reading, as well as to help them in their language work; for instance, in methods of expression and selection of words and the use of synonyms.

"The second course is for the lower grades, and is also extended into the sixth, which is the lowest grade taking the first course. The books in this course are read aloud by the teacher to the pupils and then discussed in the class; and in the lower grades, after a considerable part of the book has been read, the children are requested to repeat the substance of what they have read, in their own language, the intention being to cultivate their powers of attention as well as their powers of oral expression.

"The third course consists of books to be read by the pupils outside of the schoolroom. Books listed in [a printed pamphlet supplied to the schools] are adjusted as nearly as possible to the age of the pupils in the respective grades. At least two books in each term must be read outside of school by the pupils in the second and third grades, and the pupils in each division of the higher grades through the grammar school course. . . .

The teachers are required to ascertain that the out-of-school reading of

scholars has been profitably done. Pupils may read more than the prescribed books, but excessive reading is discouraged. Duplicate copies from two to twenty-eight, according to the popularity of the books, are provided for children's use. Prizes have been offered to stimulate interest in reading American history and kindred subjects, and have had a good effect. Lists of books on special topics are prepared for the high school classes. It is intended to open a children's reading-room, and to undertake the circulation of mounted photographs and illustrations as soon as means permit."

The following are a few examples of works from the printed list of courses of reading:—

CLASS READING.—Burrough's *Birds and Bees*, Eggleston's *First Book in American History*, Scott's *Talisman*, Lamb's *Tales from Shakespeare*, Irving's *Sketch Book*.

FOR TEACHERS TO READ TO PUPILS.—Abbot's *Alexander the Great*, Ruskin's *King of the Golden River*, Buckley's *Through Magic Glasses*, Longfellow's *Hiawatha*.

OUT OF SCHOOL READING.—Johannot's *Friends in Feather and Fur*, Carroll's *Alice in Wonderland*, Winslow's *Fairy Geography*, Wood's *My Backyard Zoo*, Blaisdell's *Stories of the Civil War*, Irving's *Mahomet*, Parton's *Captains of Industry*.

#### OTHER AMERICAN LIBRARIES.

In the course of the preceding accounts of what has been done in American public libraries, most of the methods of working with the schools have been described; it is, therefore, unnecessary to do more than indicate where similar methods have been adopted. It must be remembered that this information is necessarily incomplete, and at the best can only be considered representative.

Teachers' cards are in use at the following places. (Note that the numbers after the names indicate only how many books one teacher may take out; the letter "n" indicates no limit.):—

- Brooklyn (Pratt Institute) 6.
- Cambridge Public Library (Mass.)
  - For High and Grammar Schools 10.
  - For Primary Schools 4.
- Concord Free Library 6.
- Dayton Public Library (Ohio).
- Duluth Public Library (Minn.) 20.
- Gloversville Free Library (N.Y.).
  - For personal use, 5.
  - For class use, n.
- Jersey City Free Public Library (N.J.).
  - For personal use, 6.
  - For class use, n.
- Manchester City Library (N.H.), 6.
- Minneapolis Public Library, 4.
- Newark Free Public Library.
- New Haven Free Public Library (Conn.), 5.
- Norwich, Otis Library (Conn.), 6.
- Providence Public Library (R.I.).
  - For personal use, 1.
  - For class use, 10 or more.

Rutland Free Library Association.  
Sacramento Free Public Library (Cal.).  
Salem Public Library (Mass.), 6.  
Seattle Public Library (Washington), 6.  
Wilkes-Barré, Osterhout Free Library (Pa.).

Branch libraries in schools have been established at—

Buffalo Public Library.  
Burlington, Fletcher Free Library (Vermont).  
Grand Rapids Public Library (Mich.).  
Minneapolis Public Library.  
Newark Free Public Library (N.J.).  
New Haven Free Public Library (Conn.).  
Peoria Public Library (Ill.).

and at Buffalo, Minneapolis, and Newark, the libraries are very frequently changed.

School deliveries of books from a common stock are in operation at:—

Brookline Public Library (Mass.).  
Buffalo Public Library (High Schools only).  
New York Free Circulating Library.  
San Francisco Free Public Library.

In the last-named place the system in vogue appears to make a tolerably near approach to the Bootle system. The teacher induces his scholars to acquire tickets under the ordinary rules, and collects the tickets in a class as authority to obtain books from the library, which are then distributed to the pupils at school.

Children's libraries, or separate departments for children exist at the following places:—

Brooklyn, Pratt Institute, where no guarantor is now required.  
Minneapolis Public Library.  
Seattle Public Library (Washington).

Special catalogues of books for children are published at—

Brooklyn, Pratt Institute.  
Gloversville Free Library (N.Y.).  
Grand Rapids Public Library (Mich.).  
New Haven Free Public Library (Conn.).  
Peoria Public Library (Ill.).  
Providence Public Library (R.I.).  
Rutland Free Library Association.  
Wilkes-Barré, Osterhout Free Library (Pa.).

In several of these lists the works are classified by their suitability to different grades.

Lists on special topics, printed or type-written, are supplied to schools from—

Brookline Public Library (Mass.).  
Helena Public Library (Montana).  
Newark Free Public Library (N.J.).  
New Orleans, Fisk Free and Public Library.



New York Free Circulating Library.  
 Norwich, Otis Library (Conn.).  
 Salem Public Library (Mass.).  
 San Francisco Free Public Library.

Home reading courses, with references to public library copies, are supplied to teachers at Gloversville by the Board of Education.

Class or school reference work is undertaken at—

Brookline Public Library (Mass.).  
 Buffalo, Grosvenor Public Library.  
 Butte City Public Library (Montana).  
 Gloversville Free Library (N.Y.).  
 Newark Free Public Library (N.J.).  
 New Orleans, Fisk Free and Public Library.  
 Providence Public Library (R.I.).  
 Rutland Free Library Association.

The question of commencing relations with the public schools is under consideration by the managers of the Enoch Pratt Free Library, Baltimore; and at Helena and Butte City, in the State of Montana, praiseworthy efforts are being made to bring about a closer union of the school and library work.

Some additional figures as to the extent of a year's circulation of books through the schools in certain American libraries are now given.

	Circulation		Remarks.
	by Teachers' cards	otherwise	
Brooklyn, Pratt Institute . . . .	—	—	6,831 child borrowers.
Burlington, Fletcher Library . . .	820	52,829	—
Dayton Public Library . . . . .	—	—	14,754 vols. issued
Gloversville Free Library . . . . .	1,293	804	—
Grand Rapids Public Library . . .	1,960	32,359	{ 7,385 volumes in 35 schools.
Manchester City Library . . . . .	770	—	—
Minneapolis Public Library . . . .	—	—	Stations in 12 schools.
Newark Free Public Library . . . .	2,026	—	—
New Haven Public Library . . . . .	—	800 (per month)	—
New York Free Circulating Library .	—	7,299 (in seven months)	—
Norwich, Otis Library . . . . .	—	26,525	—
Peoria Public Library . . . . .	—	2,043 (one month)	—
Rutland Free Library Association . .	3,236	—	—
San Francisco Free Public Library . .	—	2,476	—

At the Pratt Institute, Brooklyn, normal students of the institute may borrow to the extent of three volumes other than fiction.

The librarians at the public libraries of Burlington, Hartford, Gloversville, and doubtless in many other places, cultivate close personal relations with the public school teachers.

From the Brookline Public Library a pretty leaflet of information about "The Schools and the Library" is circulated. This remark of

the librarian's is to be commended, "I hope teachers will feel free to suggest ways in which the library may co-operate more effectually with the schools. The first step, however, should be a knowledge of the library by the teachers themselves."

For three or four years past the "Library Journal," the organ of the American Library Association, has devoted a special number once a year, called the "School Number," to the consideration of public library and public school relations. Adopting a suggestion of the publisher of that journal (Mr. Bowker, of New York), Miss C. M. Hewins, librarian of the Hartford Public Library, has collected a large body of children's criticisms on books read by them. These are embodied in a paper which she prepared for and read at the second International Conference of Librarians in London last July. It will shortly be published in the transactions of the conference. I regret that space does not allow of free quotations from the proof copy I have been permitted by the courtesy of Mr. J. Y. W. MacAlister to see. It is one of the most important contributions to the question—What should children read? that has appeared. Other good papers, English and American, are indicated in the select list printed as an appendix to this paper.

#### MINNESOTA STATE COMMISSION.

The State of Minnesota regards this subject as being of so much importance that it has appointed a State Commission for Public School Libraries, which consists of the superintendent of public instruction and the presidents of the four State normal schools. The Commission "have made an improved list of books adapted to the several grades of youth attending school."

The National Education Association of the United States has lately established a library section of its organisation, thus acknowledging emphatically the educational standing of the librarian.

#### SOME OPINIONS OF EDUCATORS.

A few extracts from the opinions of schoolmasters and educational experts on the advantages obtained by extending the operations of the Public Library to the children in the Schools, and on the value of some of the methods above described, may not unfittingly be given here.

A schoolmaster at Leyton wrote to the Public Librarian:—

"Often the volumes are brought to school by the boys, and I have frequently been most agreeably astonished at the valuable and excellent character of the volumes so received. Several obtain books which illustrate the class subjects taught here, some select volumes containing further information on any current topic or subject recently touched upon by their teachers." Another schoolmaster wrote: "I consider that throwing open the splendid collection of juvenile literature you have to the scholars in the district is the greatest boon the children have ever received. Before this privilege was granted them, I was continually taking from them the usual penny dreadful. I have not seen such a thing in the school this year. Instead, I find upon their desks books by Ballantyne, Henty, Kingston, Marryat, Fenn, Kipling, Jules Verne, Mark Twain, Mayne Reid Collingwood, etc."

The following document is of interest as presenting a teacher's view of the Bootle system:—

Report of Mr. A. J. Miles, headmaster of the Bedford Road Board School, Bootle, on the working of the Bootle book delivery system, which has been in operation between that school and the Public Free Library during the past three years:—

From the teacher's point of view, nothing but praise can be forthcoming for a system yielding such advantages to his scholars and himself as must be derived from an affiliation of the school to the Public Free Library.

To be relieved from the necessity of frequently holding school concerts, or resorting to other means of raising money for the purpose of keeping a school library in a state of efficiency, is not the least of many advantages accruing from such a system. No school, however favourably circumstanced, could ever hope to vie with the free library of the borough in which it may be situated, in all that goes to make up the essentials of a good and complete library.

Speaking first of the books themselves, they are numerous, more than 2,500 finding a place in the catalogue of the juvenile section of the Bootle Library. There is, therefore, no lack of variety. They are carefully selected, so as to satisfy the needs of juvenile readers, strongly bound, replaced by new copies as often as necessary, and in the case of favourite books extensively duplicated. Books newly issued from the press are also frequently added.

The system of collection and distribution is simple and convenient. The school being made a delivery centre; the special and in many cases lengthy journey on the part of the scholars to the central library is obviated. In this way the special influence which, by virtue of their office, the teachers can exercise over their scholars, becomes an important factor in inducing them to become borrowers and readers. Regularity in the return of books is secured by the supervision of the teachers, and fines, which, under less favourable circumstances, would only too readily act as a deterrent, are minimised or avoided.

As a useful adjunct to the ordinary work of the school, the library occupies a prominent place. The children have the benefit of the teachers' guidance in their selection of books, and in view of the increased importance attaching to object lessons and the teaching of science, it becomes an easy matter for the teacher to recommend books to supplement his own teaching, not only in these subjects, but throughout the curriculum of the school, even to the extent of indicating title and catalogue number.

Silent reading under supervision is acknowledged to be a pleasurable as well as a profitable exercise, producing as it does a love for reading, and a self-reliance often lacking in the oral reading lessons. It has been found by experience that the promise of a 'silent reading' lesson, in which each scholar uses his library book, has become an inducement to be present at school on Friday afternoons.

The head-teachers further report a marked improvement in both the reading and composition of the upper classes since the introduction of the present system into the schools. That the work in these subjects has been influenced for good is certain, but how much of that improvement is attributable to the increase of home reading it is impossible to estimate. Another and most encouraging feature is the fact that on leaving school the scholars' connection with the public library does not cease. They are permitted to use the same ticket of membership, which now gives them access to the very much wider range of literature found on the shelves of the adult section of the library.

Mr. George W. Peckham, librarian of the Milwaukee Public Library, and formerly Superintendent of Schools, discusses some advantages and some dangers of the circulating school library system as organised in his city.



"There is no work that the library undertakes," says he, "that is (in our opinion) productive of so much good and costs so little. . . . I suppose that it is as true in England as it is in the United States that the children are receiving as much as they can assimilate in the way of school work in school hours . . . and it is poor policy to increase the tasks already given them. There is one other consideration that should appeal to every Englishman—viz., our school work necessarily treats children in groups, and entirely overlooks the question of developing the individual talents of the children. The library comes in to supply this deficiency. Ordinary school Readers may furnish interesting reading for the children in a form, and may be all that these children require. The fifty or sixty books from the public library, covering the various fields of human activity, give the other children just what they need. You may turn a paster in the bindery into a Michael Faraday. I attach the greatest importance to this consideration. To accomplish these results, we depend upon arousing the enthusiasm and interest of the teachers of the various schools rather than upon the school regulations.

The chief danger to the working of the scheme is that the teacher is apt to select such books for the children as she thinks they ought to like, without considering what they do like. The well-meant determination to impart useful information, when the children are craving fairy stories or tales of adventure, endangers the success of the whole plan. The child does plenty of mental work in school hours. . . . Some teachers have another habit in connection with this matter that must be looked upon with suspicion. When a child brings back a book that he has read, he is asked to sit down and write a synopsis of it. Such exercises may be very useful as school work, but children should not be held to too strict an account of what they read."

The special significance of class reference work is excellently brought out in the following extract from a report by Mr. Orr, teacher of science in the High School, Springfield (Mass.):—

"The increasing prominence of the library as a factor in school work is largely due to the extension of the so-called 'laboratory method' to all branches and grades of study. The guiding principle of this method is that the pupil should, as far as possible, gather his facts from the original sources in nature and books, and compile these facts through his own efforts. In school work of this kind, the text-book serves mainly as an outline of the topic. The plan of procedure is as follows:—The teacher assigns a certain number of topics, giving at the same time the titles of books and magazine articles which are to be consulted. Special topics may be assigned to separate pupils. The class may be divided into sections, and each section given certain work, or the entire class may be given the same subject. It is an excellent plan for teachers and librarians to prepare special catalogues, containing lists of books and magazines arranged under the various topics. In this way the yearly repetition of much work may be avoided. In our City Library the required volumes are placed on reference shelves, or in alcoves, to which students have free access. The matter which pupils have gathered is then presented in recitation, the student using an outline. The teacher makes such suggestions and criticisms as seem necessary, and in the review the entire class is expected to be prepared on what has been presented.

This method of study can be used in nearly all kinds of work, but finds its especial field in science, history and literature. Teachers who have followed the system are enthusiastic in its praise. They find that their pupils enter on their work with a zeal and interest that the best text-book failed to awaken. The children quickly catch the spirit of the investigator, the spirit of the seeker after truth, and thus become students in the best sense of the word. The danger of close adherence to text-book methods is that study becomes a 'sad mechanical exercise,' acting more like an opiate than a stimulant.

Anyone who looks in on our pupils gathered around the library tables will see that the mental powers are being aroused and quickened in a most helpful and healthful manner. The knowledge that is acquired while the

faculties are, as it were, at a white heat, is fused and welded into the student's intellectual make-up, and thus becomes a part of himself. The proper preparation of material for the class work involves a valuable training in arranging and classifying facts in logical order, while the recitation becomes an exercise in expression and ready use of knowledge.

The effect of this research work on the spirits of the recitation is worthy of mention. Teachers know full well the times when dulness and inattention settle down on a class. When such moments threaten, a few pupils charged with facts which they have gained by their own seeking, will, by their eagerness in reciting, change the entire situation. The wise teacher will have his reserve forces for such emergencies, and the library may be made his most potent ally."

Mr. W. H. Brett, the public librarian of Cleveland, Ohio, has well set forth the advantages of access to the public library as against those of access to a school library, pure and simple.

In a paper on "The Relations of the Public Library to the Public Schools," which was published in the Report of Proceedings of the meeting of the Department of Superintendence, held at Brooklyn, N.Y., February, 1892, he says:—

"The advantages of issuing [books] from a central library, whether it be the public library or a special one for the purpose, are great. It assists the teacher in the care of books, and is a check on any negligence. It affords the advantage of greater variety, and an opportunity to exchange books when desired, and brings expert skill to the work of selecting and cataloguing. Collections of books would, of course, be progressively graded, and in some of the higher grades instruction might be given in the use of reference books. The pupil entering the high school needs and should be prepared to use a large library. A small collection of books will not meet his requirements. He must look either to the library of the school or the public library. The use of the library by the pupils of the high school is an important and desirable thing, but not difficult to secure. They gladly avail themselves of it, and only require the same measure of courtesy and attention which is due to all its users. The work in the lower grades is of vastly more importance. They contain the vast majority who never reach the high school, and include those whose opportunities are least and whose needs are greatest."

Superintendent A. K. Whitcombe, of Lowell (Mass.), said in 1892:—

"Last year I went through the several rooms of my school and asked all the scholars to write on a slip of paper the names of the best three books which they had ever read. These lists I examined with very great interest, and I cannot tell you with what satisfaction I found that the whole catalogue did not contain the name of one book which I could not commend. A majority, indeed, were from the books with which pupils had been supplied by their teachers, and others were on the same lines, proving that our guidance was still felt, even when pupils made their own selection. A similar test in a school where no books had been supplied by the teacher showed a state of affairs so different that a comparison of the two lists would be enough to convince anyone of the feasibility of directing the large part of the reading of most pupils, and of the imperative duty which rests upon the teacher to do this."

The Hon. D. L. Kiehle, State Superintendent of Minnesota, at the same meeting, said:—

"Our country boys, who have with short terms of school learned some arithmetic and geography, and at the same time, by giving the hours of long winter evenings to good books, have cultivated vigorous appetites for reading, give greater promise of success as students than others who have



been long in school and under the control of the school have learned much from text-books."

Commissioner Harris in 1890 said:—

"I think that our national system of education, or the system and methods generally prevalent in the United States, is destined to be vastly improved by the efforts of librarians. What is called the 'seminary' method—the method of studying up a topic, mastering the wealth of knowledge extant on the subject, sifting and criticising what is recorded, and verifying what is true by experiment—such a method can be carried out only by the aid of a library, and it makes the library an essential instrument of school work. At present it is quite well developed in some universities (as at John Hopkins and Harvard, and some others). But it can obviously be extended with profit to all colleges and in some degree to high schools, yes, and even to lower schools. The librarian and the teacher working together can make this needed extension, and realise new and valuable features in our American school methods."

#### SUMMARY AND CRITICISM OF METHODS.

From what has gone before, it is clear that the educational value of a public library is not limited to persons who have left school; that both teachers and librarians have begun to learn that their best work is done in co-operating with each other to foster and satisfy a craving for good books; and that this co-operation is possible by a variety of methods. Probably the stage of experiment is not yet passed, but success has to so great a degree attended certain experimental methods that they may now be considered to rank among educational discoveries. The more important of these are:—

1. School libraries, temporarily deposited and occasionally changed.
2. School deliveries of books to individual scholars.
3. The teachers' card system of loans.
4. Class reference work.
5. Library lessons.

Leeds and Detroit furnish good instances of the first, Bootle of the second, most American libraries of the third and fourth, and Cardiff of the fifth, which is perhaps only a modification of the fourth method.

In respect to the first method, there is a wide difference of custom in England and America as to the furnishing of books for such libraries. Many of the American libraries provide a comparatively limited number of works for school use, but a very large number of copies, sufficient to supply a class during a reading lesson. In England, as a rule, very few copies of any work are provided, but there is a large range of choice. Judging from remarks made by certain correspondents, it would seem that even in America there is a growing opinion that the provision of any book of which fifty copies would be required is rather the work of the school authorities than of the public library authority; certainly that view would be strongly held among English librarians. On the other hand, English library managers would do well to consider whether it would not be desirable to supply copies of certain books in sufficient numbers to allow several scholars to be reading the same work, out of school hours, at about the same time. There would be obvious advantages, the chief perhaps that boys or girls could talk to each other more freely about their reading, and so benefit the more.



An objection has been raised against the second method by the librarian of a large town, which may be stated in his own words. "At least 10,000 books would be required by our schools, the storage of which and continual and heavy work of sending out and returning from some fifty schools would be impossible without a great addition to our staff, and shelving for books, which would more than double the expenditure upon the books, as well as interfere with the general work of the libraries." Branch libraries in schools are advocated in lieu of deliveries by the objector, thus nullifying much of his criticism; the difference in cost would not be great in the two systems, though its incidence would be heavy, in one case on the library authority, in the other on the school authority. In the case of school branches the main part of the paid labour would be avoided by placing the burden on the teachers—a way out of a difficulty not calculated to forward the interests of the libraries or the scholars.

To place too much responsibility for the safety of the books on the teachers is another way to hinder success. It is significant that an enquiry made in the public schools of Newark, N.J., elicited the fact that 13 out of 33 principals preferred to be excused from taking the responsibility for the circulation of library books. It is, of course, easy to say that the minority had not a proper sense of the teachers' vocation, but it is better not to place any obstacle to successful working in the way, especially one to which any suspicion of unfairness attaches. Even when the teachers' labour and responsibility is reduced to a minimum, to use the words of the librarian of the Otis library, Norwich, Connecticut, "much depends on the school teachers in library work, and there is a vast difference in teachers in this respect."

Class reference work hardly exists in the English public libraries, though individual work inspired by teachers is common enough. Before this could become at all general, some alteration in the way of greater freedom would be necessary in the Education Department's Code. With increased attention to the "Seminar" method of instruction, the possibilities of the public library in this connection must be increasingly recognised. Whether library lessons, such as those given at Cardiff, should be treated as a method distinct from class reference work, I am not sure, but the good-will of the Education Department to this latest development of a means of connection between the public schools and the public library is seen in the ease with which the time-tables of the Cardiff schools were adjusted to allow of the necessary visits to the public library.

Facilities for meeting on common ground with public school teachers are much needed by librarians. If teachers' associations would invite the public librarian of the district to discuss with them the subject of this paper, mutual advantages would result, not the least of which would be a closer personal relation between the officers of two important corps in the educational army.

## WHO IS TO PAY FOR THE EXTENSION OF LIBRARY WORK TO THE SCHOOLS?

The public libraries of Great Britain and Ireland are doing a valuable work for the adult population, a work which naturally is growing in extent from year to year. The means for carrying it on are provided by a local rate, which cannot, except in a few towns, exceed one penny in the pound of the local assessment. The exceptions are towns which have obtained special powers by a local Act, Manchester, Birmingham, Oldham, for example.

The amount produced is in very many cases only sufficient to pay for the work now carried on, and in some instances is prohibitive of any movement to supply the schools with books. What then is to be done? Clearly the most pressing need is the abolition of the maximum rate limit in the Public Libraries Acts. This, however, may take time to accomplish; meanwhile can the School Boards or Boards of Voluntary School managers render any help? Is there no Imperial fund for grants in aid? The answer at present is a negative one. No doubt with the education of the public mind a way will be found for the public libraries singly or conjointly with other educational authorities to enter on this almost unoccupied field for fruitful work, and the best way to educate opinion is to give experimental demonstrations in every locality of the possibilities of productive use for the additional income desired.

This is not the place in which to enter more fully into the financial question, but in comparing the progress of the libraries of America and of England in respect of their work for schools, it must be remembered that the American libraries are usually much more liberally endowed, and supported by larger municipal funds, than those of similar size in this country; for example, the town of Worcester (Mass.) expends annually on its public library nearly £7,000, while Birkenhead, with a population almost the same, finds less than £2,500 for a like purpose. In the Southern and Western States the contrast with England is not so great; it is, nevertheless, clear that as a whole the public libraries of the United Kingdom are less well supported financially than those of the United States.

JOHN J. OGLE.

## A SELECT LIST OF PAPERS BEARING ON THE SUBJECT OF THIS REPORT.

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## THE EDUCATIONAL MUSEUM OF THE TEACHERS' GUILD OF GREAT BRITAIN AND IRELAND.

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In 1890 the Council of the Teachers' Guild realised that a collection of modern apparatus and aids to teaching various subjects would be of great value to the members; and when the question of moving their offices from Buckingham Street, Strand, came up for consideration, after very careful deliberation, the Council determined to take a house, No. 74, Gower Street, and devote the upper portion of it, which they could not use for the purposes of the Guild, to such a Museum, if Teachers were found willing to bear a proportionate share of the expense of rent, etc. The desire for such a collection of apparatus was so widely expressed that it was hoped that a fund would be collected consisting of annual subscriptions sufficient to pay the rent of the rooms assigned to the Museum, and that the exhibits would be mainly supported by contributions from publishers, etc. This expectation, however, has not been fulfilled; the whole burden of rent has fallen, after the first year, on the Teachers' Guild, and such funds as have been contributed have been applicable only to the provision of exhibits.

In the foundation of such institutions the initial steps form the greatest difficulty, and the task seemed nearly impossible, when the Royal Geographical Society came forward with a very generous offer of lending to the Teachers' Guild the apparatus that had been collected for an exhibition in 1886. This proved a most valuable nucleus, not only for the Geographical Section, but also for the Historical one, as many of the pictures bore more directly on that subject.

The Museum was formally opened in May, 1892, and its original scheme included the following branches:—

- (1) Class books.
- (2) School Documents.
- (3) Apparatus for the teaching of History.
- (4) Apparatus for the teaching of Geography.
- (5) Apparatus for the teaching of Classical Antiquities.
- (6) School plant and apparatus.
- (7) Anthropometry.
- (8) Music and Dancing.
- (9) Natural Science.



But of these, Sections (6), (7), and (8), for various reasons, have not yet been organised at all; and as South Kensington still maintains the Scientific branch of its Educational Museum, the Guild did not propose to attempt anything in the direction of Section (9). The present condition and modes of working of the other sections are briefly described below.

It will be obvious from the detailed account of the various sections which follows, that a beginning only has been made, and that much remains to be done before an adequate collection can be formed over so wide a range of subjects. The Curators have endeavoured to satisfy demands or enquiries made by visitors to the Museum, and have noted already that, besides members of the Teachers' Guild and others in this country, several Foreign and Colonial visitors have lately made use of the Museum in selecting apparatus for historical, and geographical teaching. But increased efficiency must necessarily depend, in a great measure, upon the funds at the Curators' disposal; and these, except in the Section of Hellenic History, which has been subsidised from a special source, have not been sufficient to enable them to add continuously to their exhibits.

The main object of the Museum being to give teachers and all interested in education an opportunity of inspecting, and obtaining full information concerning the most recent aids to teaching that are employed either at home or abroad, it has been necessary throughout to keep as closely as possible in touch both with the demand for these, and with the supply of books, illustrations and other apparatus.

Teachers will easily understand that it is only through enquiries, suggestions, and co-operation on their part, that the Educational Museum can be kept abreast of the growing requirements of Teachers; and that the development of the Museum must be mainly shaped by information and criticism from outside. For their use a Suggestion Book is placed in the Museum, and written communications may be addressed to the Hon. Curators, at 74, Gower Street, specifying the particular department which they concern.

Publishers have been repeatedly and widely invited to deposit specimen copies of new maps, diagrams, and illustrated books in the Museum, and a number of firms, especially from abroad, have seen their way to contribute exhibits since the first opening of the Museum. But it has been felt that the comparative indifference of British publishers to the convenience of their public, except in regard to the more elementary school-books, makes the position of an Educational Museum in this country much more precarious than that of the corresponding institutions abroad. Each exhibit is labelled with the publisher's name, and other necessary information.

The hours during which the Museum is open are the same as those of the Offices of the Guild, viz.: 10 a.m. till 6 p.m. (Saturdays till 5 p.m.); but members who wish to bring classes to work in the Museum must give two days' notice to the General Secretary, or to one of the Curators.

The following are entitled to make free use of the Museum for purposes of consultation :—

- (1) All members of the Teachers' Guild of Great Britain and Ireland.
- (2) All individual donors of £5 and upwards, to the general funds of the Museum, or to any section of it, whether members of the Teachers' Guild or not.
- (3) All individual subscribers of 10s. and upwards annually, to the general funds of the Museum, or to any section of it, whether members of the Teachers' Guild or not.
- (4) All persons introduced by the Royal Geographical Society, or the Hellenic Association (p. 5), or by a member of the Teachers' Guild.
- (5) All contributors to the Museum, whether by loan or gift, are entitled to a card of introduction from the Curators.

#### I. CLASS BOOKS.

A permanent exhibition of class books in all subjects taught in schools. This department has become fairly complete, and is almost self-supporting ; for the publishers send specimen copies of the newest school books as they are published. These are arranged on the shelves in *subjects*, so that teachers before making a selection can readily compare, not only the relative merits of the works, which are available, but also the standard of knowledge required for each.

#### II. SCHOOL DOCUMENTS.

A beginning has been made in collecting school curricula, time tables, syllabuses of lectures and lessons, specimen exercises, and examination papers ; but the heads of schools do not seem to feel sufficient interest in helping to make this a valuable collection, and it is only by their co-operation that it can be made really efficient.

#### III. APPARATUS FOR THE TEACHING OF HISTORY.

In this section it has been found advisable almost from the beginning to combine the original Sections III. and V., as it was impossible to make any dividing line either between Ancient and Modern History, or between Ancient History and the study of Greek and Roman Antiquities in illustration of Classical Literature ; series, in particular, of pictures and diagrams often extending over both.

The work of this combined Section of History and Antiquities is divided among three collateral Departments :—

- (1) A reference collection of maps, plans, diagrams, views, portraits, and facsimiles available in illustration of Historical Teaching. This collection is deposited in the Educational Museum, and exhibited as conveniently as the limited accommodation allows. All exhibits are labelled with the publisher's name, the published price, and the discount to schools in cases where discount is given.



This is further subdivided under the headings of Oriental and Biblical, Greek, Roman, and Mediæval and Modern History, which are described separately below.

This department is already filling the space assigned to it, but must be kept supplied with new publications, if it is to maintain its usefulness; though the object of the Curators has been not so much to accumulate all possible diagrams, as to select, with the means at their disposal, typical examples of the several series.

The educational importance of lantern slides for illustrating Historical lectures and lessons has been fully recognised, and several cases of selected slides are exhibited, while others for which exhibition space cannot be found, are accessible in the Museum.

(2) A Loan Collection of such lantern slides, and of such other illustrations as may be found practicable for the use of members of the Teachers' Guild, and all others who are entitled to use the Museum, has already been established in the Oriental, Hellenic, and Roman Sections, and a similar Loan Collection of diagrams, models, will be organised as soon as circumstances permit.

(3) The third department of the Museum's work consists of the correspondence carried on between the Curators and those Teachers who consult them from a distance, or whose wants are not supplied by the apparatus actually exhibited.

This Department of Correspondence has, of course, less tangible results to show than the preceding; but an increasing number of Teachers have made enquiries, and received information, through the Museum in the few years during which it has been open. During the Vacation Course of the College of Preceptors, in January, 1898, two receptions were held in the Museum; and the Curators take the opportunity of acknowledging valuable suggestions received then and at other times; many of which they have already attempted to put into practice.

To this must be added, that in several cases enquiries have been made for models and illustrations, which cannot be obtained from existing sources; and the attempt is being made to supply what is required, by publishing, through the Educational Museum directly, such diagrams, models, and other illustrations, as seem to be desirable in the interest of Historical Teaching, but are not to be obtained elsewhere.

The abstract which follows will give some idea of the progress which has been made in the various sections of the Historical side of the Museum.

### *IIIa. Oriental History and Antiquities.*

An Oriental and mainly Biblical Section, seems from enquiries which have reached the Museum to be in considerable demand among Secondary Schools. The admirable Biblical Museum of the Sunday School Institute, in Serjeants' Inn, already undertakes to supply a number of models, reproductions, and actual examples of antiquities and illustrations of Oriental life; and a selection from among these is



already exhibited in the Educational Museum, together with maps, and wall-pictures illustrating the great civilisations of the East.

Arrangements have also been made, through the liberal action of its Committee, for the loan and sale of slides from the large and valuable series of negatives accumulated by the Palestine Exploration Fund, on the same terms as the Hellenic slides mentioned below; and a catalogue of these, with a number of additional slides from other sources, will form part of the next report of this section of the Museum.

### *IIIb. Greek History and Antiquities.*

The Hellenic Section has been enabled to develop more rapidly and systematically than any other except the Geographical, hitherto, through the substantial aid which it has received from a source originally independent of the Guild.

This is the Hellenic Association, which was founded by the Rev. Thomas Field, D.D. (now Warden of Radley College, and at that time Headmaster of the King's School, Canterbury), and was placed on a working footing in 1892 by private subscription among its members, with the object of forming a collection of pictures, diagrams, and models as illustrative aids to the teaching of Greek Literature, History, and Archæology. In March, 1893, it was agreed that the Hellenic Section of the Teachers' Guild Educational Museum should be worked by a Joint Committee of the Guild and of the Hellenic Association, the latter guaranteeing three annual sums of £30 to the Educational Museum for its maintenance. The three subsidies thus guaranteed have been more than covered by the subscriptions to the Association; and a total sum of more than £120 has been expended upon the collection, under the administration at first of the founder of the Association, and afterwards of Mr. J. L. Myres, student of Christ Church, Oxford, who succeeded him in November, 1895.

The Hellenic Section of the Museum consists, in conformity with the general scheme indicated above, of the following departments:—

(A) A Reference Collection of recent publications, exhibited in the Educational Museum, and including:—

Wall Pictures, Diagrams, and Maps, specimen copies, and in some cases complete sets, of the Classical Series published by Brückmann, Cybulski, Fischer, Hölzel, etc.

Photographs of Sites, Monuments, and Works of Art, selected from the Series of Alinari (Florence), Guyau (Paris), Martin (Glasgow), Mansell (London), Rhomaïdes and the English Photographic Co. (Athens), Sommer (Naples), and Brunn's "Denkmäler." A classified list of these series is nearly ready for publication.

Books of Reference, Atlases, Illustrated Handbooks, and Publishers' Catalogues, *e.g.*:—

Baumeister. Griechische und Römische Bilder: 4to., 7s., which contains the whole of the illustrations from the four volumes of Baumeister's "Antike Denkmäler."

Weisser. Bilder-Atlas.

Lady Evans. *Greek Dress*. 8vo. 5s.

British Museum Guide to Greek Coins, with 70 Photographic Plates. 8vo. 21s.

P. Gardner. *Types of Greek Coins*, with Photographic Plates. 4to. £1 10s.

Models of Architecture; Raised Maps of Ancient Sites, reproductions of Greek Dress; casts of Coins, etc. Under this head the following have been already arranged.

The Façade of a Doric Temple: one of the first models to be made and too bulky for most class-rooms. The German models of the Acropolis, Greek Temples, and buildings, and the corresponding Roman Series, have not been acquired, for want of space; but particulars of them can be obtained from the Curators of the Museum.

The Relief Map of Syracuse, published some years ago by Messrs. Haverfield and Jordan, is henceforward to be obtained through the Museum. The price of the plaster cast, painted, labelled, and securely packed, is £2 2s. 0d.

Similar relief maps of the neighbourhood of Marathon, Salamis, Plataea, and Sphacteria, of the same size as the Syracuse, and of Peloponnese on a larger scale, are in preparation, and should be ready for publication in the autumn of 1898.

A model set of Greek Costumes has been prepared for the Museum under the direction of Miss Penrose, Principal of Holloway College, for use with a lay figure, standing 21in. high over all. The price of the set of five costumes is £1 1s. 0d. A set of Greek Armour is in preparation. Suitable lay figures cost £1 each.

A representative collection of electrotypes reproductions of classical coins has been arranged with the kind assistance of Mr. B. V. Head, Keeper of the Coins of the British Museum, and taken from originals under his care.

Similar reproductions of a large number of Greek Coins are made by Mr. A. Ready, British Museum, London, W.C., price 2s. 6d. each, and can be obtained from him, either direct or through the Museum.

Lantern Slides of Coins are included in the collection described below; and specimens of these are exhibited in the Museum.

(B) A Loan Collection of Lantern Slides, the property of the Hellenic Association, is deposited with Messrs. G. Philip and Son, 32, Fleet Street, E.C., to whom orders should be addressed. They are offered to members of the Hellenic Association, of the Teachers' Guild, and also of the Hellenic Society (in return for the privileges detailed below) on the following terms:—

Slides are lent for one night at 1d. each; 10d. a dozen.

Slides are sold at 1s. each; plain photographs.

Prints from the slide-negatives are sold at 1½d. each, unmounted.

A complete set of the slide-prints, forming an Illustrated Catalogue, as well as specimens of the slides themselves, and of the series of slides



published by Messrs. Sommer, of Naples, and other dealers, are exhibited in the Museum in Gower Street.

Slides from all Messrs. Sommer's photographs can be obtained directly through the Museum, at the uniform price of 1s. each.

The collection now consists of more than 800 slides, arranged in thirty-four series. Other series will be prepared, and additions will be made to existing series, as long as funds are available. This section of the Museum is now self-supporting; for the low rates charged for the hire or sale of slides, after meeting the working expenses, leave a small margin of profit, which is devoted to the extension of the Slide Collection.

The Collection is classified as follows:—

i.	Maps	xi.	Views. Oriental	...	...	...	Maps 17	Views 6
ii.	"	xii.	" Asia Minor	...	...	...	" 9	" 22
iii.	"	xiii.	" Northern Greece	...	...	...	" 15	" 35
iv.	"	xiv.	" The Islands	...	...	...	" 2	" 7
v.	"	xv.	" Attica (outside Athens, cf. xxiii.)	...	...	...	" 3	" 34
vi.	"	xvi.	" Peloponnese	...	...	...	" 8	" 53
vii.	"	xvii.	" Western Greece	...	...	...	" 2	" 10
viii.	"	xviii.	" Italy and Sicily	...	...	...	" 3	" 16
ix.	"	xix.	" The West: Gaul, Spain, etc. (in preparation).	...	...	...		
xxi.	Prehistoric Greece. Homer and Mycenae						45 Slides.	
xxii.	Persia and the Persian Wars						22	"
xxiii.	Athens.—Topography						52	"
xxiv.	Athens.—History (portraits, inscriptions, coins, etc.)						34	"
xxv.	Portraits						26	"
xxvi.	Coins						128	"
xxvii.	Social Life (scenes of daily life, etc., mainly from vases)						29	"
xxviii.	Arts and Manufactures						9	"
xxix.	Warfare						4	"
xxxi.	Sculpture. The reference numbers are the same as those of the figures in Prof. E. A. Gardner's Handbook of Greek Sculpture						130	"
xxxii.	Religion and Mythology (statues, vase-paintings, etc.)						39	"
xxxiii.	Drama: (Plans and views of ancient theatres; scenes from modern revivals of Greek plays—Antigone, Agamemnon, Ion, Frogs, etc.)						43	"
xxxiv.	Vase-painting (typical examples of successive styles)						20	"

By the very liberal action of the Council of the Society for the Promotion of Hellenic Studies, all persons who have access to this above-mentioned collection of slides are entitled since 1895, to use that Society's valuable collection of slides, on the same terms as its own members, namely, 3d. per slide for any time longer than three days; reduced to 2d. for any shorter period. Orders for these slides should be addressed to the Assistant Librarian of the Hellenic Society, 22, Albemarle Street, W., from whom also a full descriptive catalogue can be obtained, revised to the end of 1897.



*IIIc. Roman History and Antiquities.*

A Roman Section, which is the obvious counterpart of the Hellenic, and had been already frequently enquired for by correspondents, was first discussed in 1895, but want of funds prevented anything beyond the collection of a few diagrams, plans and photographs from the series of Hölzel, Alinari, Sommer, the Art for Schools Association, etc., and the formation of the nucleus of a slide collection, until the end of 1897; when sufficient subscriptions were promised to make it possible to put the latter in a condition for public use in the course of the present year.

Leave has already been obtained from the Council of the Society of Antiquaries to reproduce illustrations from *Archæologia*, and the other publications of the Society, and it is hoped that by confining the illustrations to these and similar first-hand sources, some of the mistakes may be avoided, which were inevitable in the original Hellenic series.

Terms have also been arranged, as in the Hellenic Section, for the supply of photographs through the Museum from the principal series published in Italy and elsewhere.

*IIId. Mediæval and Modern History Section.*

This Section, like the Roman and Oriental, has been much hampered by want of funds; but at the beginning of the present year it was found practicable to re-organise the existing collection, and to increase it somewhat. In view of the comparative frequency of adequate series of historical slides, no attempt has been made to form a new collection; but specimens are exhibited of the large series of Messrs. Philip, and Messrs. Newton, of London, and of Messrs. Valentine of Dundee.

In view of the great range of subjects, and the limited space at their disposal, the Curators have thought it more satisfactory to exhibit, on the walls of the Museum, groups of pictures illustrating a few great historical periods—for instance, the time when the freedom of England in particular, and Europe in general, was threatened by Philip II. of Spain—and to include in each group, as far as means will allow, portraits of the persons who took a leading part in events, together with pictures illustrating contemporary warfares, manners, customs, and dress. Other periods and subjects will, however, be found represented.

Notable recent acquisitions are the large model of the Shakesperian "Globe Theatre," and a number of large photographs of recent revivals of Elizabethan plays, deposited in 1897, by the Elizabethan Stage Society.

**IV. APPARATUS FOR THE TEACHING OF GEOGRAPHY.**

This Section, from its opening in May, 1892, has been enabled to make the largest show of exhibits, owing to the liberality of the Royal Geographical Society, who have lent, for an indefinite period, a large number of things which were given to them for an exhibition of *Geographical Apparatus*, held in London in 1886, and subsequently lent for a temporary exhibition in Manchester.

The first care of the Hon. Curator, Miss H. Busk, to whom is in great part due the first organisation of the Museum, was to arrange upwards of 1,200 articles thus sent to the Guild, under a classification, which would be useful to teachers. They are accordingly divided into the following Classes:—

I. Books; II. Models, etc.; III. Atlases; and IV. Wall Maps and Pictures.

I. The *Books*, about 600 in number, amongst which are many foreign works, are arranged on shelves under the following headings:—

(a) Primers and Readers; (b) General Geography; (c) Physical Geography; (d) Descriptive Geography; (e) Historical Geography; (f) History and Method; and (g) Miscellaneous. Some books have been added since the opening, and notably, Reclus' "Geographie Universelle," given by Mrs. F. C. Turner.

II. The *Models* consist of maps, raised either in high or low relief, either of whole countries, or of small portions of countries; models of a volcano, a glacier, part of the course of the Rhine, and similar things; globes of all kinds and sizes; telluria; orreries; a model of the Ocean currents, as designed by Mr. A. W. Clayden; and Miss Gregory's geodoscope, etc.

III. The *Atlases* are arranged according to the nation that has published them. About 450 are lent by the Royal Geographical Society, and nearly 40 have been added by the Guild since the opening of the Museum.

IV. *Wall Maps and Pictures* form the largest class in bulk, though not quite so numerous as the books; about 280 were sent by the Royal Geographical Society, and nearly 150 have been added during the last five years. The wall maps are all mounted on linen in such a manner that they can be hung up and seen side by side. In this way the maps issued by different publishers and in different countries can be compared before being purchased, and members of the Guild have also in some instances copied parts of, or taken ideas from, maps that were too expensive for purchase. This is the only collection of wall maps of which the sheets are mounted together so that the maps can be seen entire. Publishers are very willing to send maps, which can thus be seen by teachers; therefore the more the collection is used, the more complete it will be made. The maps are arranged in cupboards and portfolios, and are all marked for easy reference, a descriptive catalogue of them lying on the table in the room. If funds allowed, portfolios containing folded wall maps might be arranged and lent on hire to teachers for a month or a term.

Another important assistance to the teaching of geography is an adequate and typical collection of pictures. In the portfolios and on the walls there are specimens of several different collections of pictures, many of them showing the manners and customs of the people with their various modes of life, etc., as well as views of the country itself. There is also a complete set of pictures of scenery published by Hölzel, of Vienna, which, coloured as they are, form almost more valuable illus-

trations of scenery, under various forms and conditions of climate, than any lantern slides can do.

An attempt has been made to arrange a collection of lantern slides, typical of various kinds of phenomena and scenery in nature, as well as the way in which man has utilised the world's various resources, but the area is so very vast, that, as each teacher with any enterprise wishes to make his own selection, it has been thought wiser simply to arrange various classes of illustrations, under which Messrs. Philip and Son (the Guild's agents for lantern slides) arrange such maps and views as they can collect from various sources.

The headings under which these lantern slides are arranged are as follows:—

1. Maps of all kinds (physical, political, ethnographical, etc.), and diagrams of parts of countries.
2. Mountains, with many sub-divisions, such as ranges, peaks, glaciers, passes, volcanoes, etc.
3. Lakes and lake scenery.
4. Rivers and valley scenery.
5. Caves, etc.
6. Coast scenery, including islands, bays, capes, etc.
7. Towns and their positions.
8. Types of men and their customs.

## CONDENSED CATALOGUE OF THE GEOGRAPHY SECTION.

### 74 MODELS, GLOBES, RELIEF MAPS, ETC.

Model of a glacier.

Model of the Cumbrian Mountains, showing the lakes with graduated depths.

Model of Atlantic Ocean currents.

Model of an island formed by volcanic agency.

Model of the Rhine from Mainz to Köln.

Geodoscope with atmosphere represented by glass globe.

Model of ideal landscape, showing various physical phenomena.

Diagram to show the effects of the earth's revolution in her orbit.

Large standard tellurium by Dr. Schmidt, showing the diurnal rotation of the earth; the orbit with the signs of the Zodiac, also the earth's relation as a planet; relations of the moon and earth; the parallax, etc.

5 other more simple telluria.

22 terrestrial globes—English, French, German, and Italian.

8 celestial globes—English, French, German, and Italian.

22 relief wall maps—French, German, and Italian.

1 orrery, etc.

6 casts of human faces, showing the marked racial characteristics.



430 WALL MAPS AND PICTURES.

- 118 published in England.
- 103 published in Germany.
- 73 published in Austria.
- 31 published in France.
- 16 published in Holland and the Netherlands.
- 15 published in Sweden.
- 11 published in Italy.
- 11 published in Switzerland.
- 3 published in Belgium.
- 49 miscellaneous and outline maps.

These maps and pictures are arranged under the following headings:—

- 117 Europe and parts of Europe.
- 41 British Isles.
- 27 the World.
- 22 classical—Greek, Roman, and Biblical.
- 18 mathematical and astronomical.
- 18 America and parts of America.
- 14 Asia and parts of Asia.
- 11 Australia and Polynesia.
- 10 Africa.

All the above wall maps are mounted complete.

102 Pictures, about half of scenery showing special geographical features in different parts of the world, and the other half descriptive of the inhabitants both racially and also showing their manners and customs.

376 ATLASES.

These are arranged under the countries in which they are published as follows:—

- 203 published in England.
- 52 published in France.
- 35 published in Germany.
- 33 published in Holland and the Netherlands.
- 23 published in Austria.
- 12 published in Sweden.
- 11 published in Switzerland.
- 4 published in Italy.
- 3 published in Belgium.

606 BOOKS.

The following table shows how many different nations are represented:—

- 345 published in England.
- 73 published in France.
- 42 published in Germany.

- 36 published in Holland and the Netherlands.
- 23 published in Austria.
- 23 published in America.
- 22 published in Sweden.
- 17 published in Belgium.
- 11 published in Switzerland.
- 11 published in Spain.
- 2 published in Denmark.
- 1 published in Italy.

These books are arranged on the shelves, in alphabetical order of the authors' names, under the following headings:—

- 284 Geography primers.
- 130 General Geography.
- 76 Miscellaneous.
- 53 Physical Geography.
- 40 Descriptive Geography.
- 14 Method.
- 8 Historical Geography.

In a condensed list it is impossible to specify any amongst so many works that are useful, but the most valuable book for reference is a complete Reclus' "Geographie Universelle," in twelve volumes. The descriptive geographies mainly published in America and France are not much known in England, and are very useful to teachers.

JOHN L. MYRES.

## THE HASLEMERE EDUCATIONAL MUSEUM

*(With notes as to Temporary Museums).*

The Haslemere Educational Museum took its beginning from a wish to try how far such collections might be made useful as a means of popular instruction. The design was to collect in a building, large enough to avoid crowding, objects of all kinds likely to interest the observer and to aid his clear comprehension of descriptions which he might have read in books. My friends used to say, "Of course you will make it a *local* museum and get a complete collection of objects to be obtained in the neighbourhood." To this my reply always was, "Certainly not, collecting is good in its way, and is an excellent training of the faculties of observation. I shall try to encourage it, but the main object of an *Educational* Museum should be something quite different and of far larger scope. It should aim at supplying the means of obtaining knowledge to thousands who will none of them ever themselves become collectors or attempt any original work. This purpose could not be served by a merely local collection. Geology must be illustrated by fossils from all strata, and Botany, Zoology, and History by specimens from all parts of the world. My wish is that even uneducated persons should be enabled to grasp the great principles of Biology, and to take a firm hold of the main facts which have been established as to the history of the planet on which they live and the progress made by its inhabitants. I shall not attempt to train specialists (although for them also certain facilities may from time to time be offered), but rather to make elementary and general knowledge an easy acquisition to all."

The original collection was made in a wooden room which I had built close to my house at Inval. From this we overflowed into another similar room, also built for the purpose, and next into several barns, which were adjacent to it. In all these the specimens were for the most part displayed openly on tables, and free handling of them was permitted, very few being under glass. Explanatory lectures were given from time to time in these rooms, chiefly on Sunday afternoons.

In 1894 the opportunity occurred for building more commodious premises close to the town of Haslemere, and the present erection was designed and executed for me by my son Herbert. Our lectures at Inval had always been given, if the weather permitted, in the open air, and a certain number of specimens of indestructible kind had been displayed outside the rooms. In designing the new rooms, we provided a large open shed for the exhibition of certain classes of specimens, chiefly geological, which do not require much protection, and between this long shed and the main building, there is an open space, partly gravelled and in part a grass-covered bank, in which lectures and demonstrations can be given. This arrangement has been found very convenient. The shed offers a suitable place for the arrangement of geological specimens on the space-for-time method, and also for the temporary display of special groups, more particularly of recent objects, such as flowers, fungi, or seaside objects. It is also a ready resort in the case of rain during



an open-air lecture. It may be here remarked that there is, I believe, an universal preference of the open air for lectures in summer weather.

The shed to which reference has just been made measures 110 feet in length and 12 in width. It is open on the south side, and closed at its back and ends. The back is fitted with shelves, and these are divided by bars of wood which make altogether 35 compartments (vertical), each being two feet in width. Each one of these compartments is supposed to represent a million years, passing onwards from Cambrian to present times. Specimens or drawings of fossils appropriate to the several periods are placed in each. Some small movable glass-topped cases have been recently found necessary for the protection of the more valuable fossils. A few modern objects have been introduced into these departments, their utility serving as an apology for the anachronism. Thus modern sponges and corals, as being more easily identified than their fossil representatives, are shown together with the latter. A stuffed sturgeon is placed as a representative of heterocircal fishes in the Devonian epoch, and living ferns, palms, fir-trees, and phanerogamous plants are introduced at their proper positions. The calculation of the periods of geological time, which is exhibited in this large diagram, has been made by reference to the thickness of the strata. In explaining it, I never lose the opportunity for avowing that the present state of knowledge does not justify us in assigning definite periods of time to the changes in the formation of the earth's crust, and that what has been here attempted must be accepted as an approximation only. With full allowance on this score, I believe it is not open to any serious objection, although I am well aware that it may be liable to much criticism. I feel sure that it has served better than any other method could to impress upon many successions of visitors the lessons of the immense duration of geological time, of the order and relative length of different periods, and of the succession of animal and vegetable life on the earth's surface. For educational purposes, that is to enlarge the grasp and purview of the mind, these general lessons are of far greater importance than the knowledge of details. If the latter are desired, it is a great advantage to have secured, in the first instance, a vivid and picturesque representation of the general scheme. Many a time have I observed the astonishment with which the revelation of the extremely short duration of human history on the earth in comparison with that of preceding ages of life as conveyed by this diagram, has been received by my auditors. Yet this is surely one of the most instructive of all possible realisations.

Leaving the geological department we ascend a grass bank by steps to a long platform, in front of the principal building. This room measures 74 feet by 26, and is divided lengthwise into two. The larger of the divisions is devoted to Zoology and Botany, and the smaller, *i.e.*, narrower, to the History of Mankind. The Zoological, or Biological, department contains the usual objects to be found in a natural history collection. Two long tables occupy the floor, and there are plenty of chairs. There are pedestal sets of drawers for a systematic collection of fossils, and others for rocks, eggs, insects, shells, and vegetable pro-

ducts. Many descriptive labels are to be found in this collection, and the short descriptive catalogues published by the Natural History Department of the British Museum, and other books for reference are on the table. It cannot, however, be asserted that the labelling is anything like complete. It is, however, gradually being improved, and much care is taken to avoid, in such descriptions as are offered, all pedantry and the obtrusion of scientific phraseology, which is often so discouraging to beginners. On one long table we have in due order cases devoted to sponges, foraminifera, corals, starfish, sea urchins, worms, crustaceans, insects, and molluscs. Two or three cases are devoted to objects found at the sea-side.

Passing out of the larger room by doors, of which there are two, one at each end, we enter the gallery for the illustration of Human History. The whole of one side wall of this gallery is devoted to a "space-for-time" display of the course of the history of mankind, from the twentieth century B.C. to the present time. The wall is divided by vertical lines into forty equal spaces, each space measuring eighteen inches, and representing a century; before each of these spaces are placed names, portraits, maps or engravings having reference to the time. Busts of Homer, Socrates, Caesar, Dante, Chaucer, Shakespeare, Milton, Newton and some others stand at their proper positions on the table which fronts the diagram, and a certain number of medals, coins, and other objects also find their places on this table, in connection with the centuries to which they belong. At the foot of every century-bar, the visitor finds mounted on board, so that he can take it in the hand for perusal, the pages of my work, "The Centuries," which belong to it. Thus it is easy to read up the chief facts of each century, without referring to any other book. Other works on chronology and history for more detailed reference are, however, placed on the table.

This gallery contains a considerable anthropological collection, very useful for lectures, but not systematically arranged, nor as yet well labelled. We have stone implements of all the usual types, and a fair collection of skulls to illustrate the progressive development from the anthropoid apes to various races of man.

The chief difficulty in the formation of Educational Museums consists in the cost incurred in providing a room. It was in the hope of finding some answer to this objection that for some years my Haslemere collection was lodged in large part in a disused barn. The present buildings, although large and commodious, and built for the purpose, have not been expensive. They are all on the ground floor, having no raised galleries, and they are built of wood. The large natural history and history museums with the geological shed, cost £636, and the book room built subsequently, about £600, fittings, etc., included. Although, in the first instance, I was very desirous to dispense as much as possible with glass cases, and to leave the objects on open tables, I have found it desirable, as our possessions have increased in value, to resort more and more to closed glass-covered cases. A considerable number of cheaply made small cases have accordingly been constructed, they are almost six feet long, and have cost about thirteen shillings each. The



tables are still of deal boards on trestles, and upon these the cases referred to are placed. They are not too large, and can be easily moved about. Of the objects not liable to injury a large number are still left unprotected.

The provision of a room is the first requisite, and I am convinced that it is most desirable that this room should be large. If it be large and well lighted, that is all that is needful. It is not in the least necessary that it should possess any other attractions. Next to the room, but quite secondary to it, comes the provision of specimens. I do not believe that a zealous Museum Committee would ever encounter much difficulty in this. Collectors of curiosities and of natural history specimens abound everywhere, and in many instances are only too glad that some good use should be made of what they have accumulated. It would be needful only, as regards many objects, that an Educational Museum should make its wants known. There would, however, remain some of a very desirable kind which would have to be either borrowed or bought. My own collection has profited much by the liberality of my friends, but the greater part of it has been bought at Stevens' sale rooms in a half-wholesale way. Objects of the utmost value for educational purposes may often be obtained there at very little cost. Did there exist a Museum Association with a central depôt, a large number of museums might be well supplied very inexpensively. For a certain class of the more costly objects, I would strongly advise that arrangements should be made for their display now at one place, and now at another in rotation.

What will be said, in speaking of Temporary Museums, in reference to the exhibition of recent specimens—flowers, insects, fish, etc.—in Vivaria applies, of course, still more strongly to permanent educational collections. At Haslemere we always have, in addition to the flower stand, a number of bell glasses in use for mollusca, fish, water-plants, etc.

During the summer of 1897, the Haslemere Museum loaned a considerable number of specimens and drawings to a temporary collection which was formed at the little seaside town of Hunstanton. It may be suitable in this connection that I should here say a few words as to Temporary Museums in general. They may possibly in the future become common, and when they do so they will certainly serve a very useful educational purpose. They are by no means exclusively desirable for seaside towns or places to which visitors resort, but might be very suitably formed in any village or small town not possessing a permanent one. One great recommendation is that they do not involve any expense for building, and very little for management. I have before me the balance-sheet of our Hunstanton one, which was open six weeks, and it deals with receipts and expenditure which in total amount only to three pounds nine shillings and a penny. We charged a small sum for admittance, excepting on Sundays, when it was free. The receipts were in part what was taken at the door and in part some small donations by members of the committee. The room was one of two used for the Board School, and this we had at a rental of half-a-crown for the six weeks. A trifle had to be paid for boards to place



over the desks, to make them into tables, and a boy who kept the door also received a small wage. The backbone of the collection consisted of a fine series of stuffed birds, lent us by Dr. C. R. Whitty, and added to by Mr. le Strange. The most valuable part of our work, however, was probably done in connection with recent and living specimens. These consisted of flowers, fungi, galls, seaweeds, etc., which were brought in from day to day by visitors. We had also a number of basins and bell glasses, supplied from day to day with sea water, in which living fish, molluscs, sponges, and zoophytes were displayed. A saturated solution of common salt served admirably to preserve for as long as we wanted them, dead specimens of mollusca, etc., exhibiting their anatomy. Four microscopes (lent) were in constant use, and there was a fair collection of books of reference (also lent) on the table. A lecture on the collection of birds was given by the Rev. Mr. Tuck, and one on the fungi which destroy trees by Dr. Plowright, of King's Lynn. In connection with this museum, several excursions, botanical and geological, were taken. It would be absurd to represent the Hunstanton Temporary Museum as an important success. It was undertaken at very short notice, and under many disadvantages. I feel sure, however, that it served a good purpose and increased the knowledge of many visitors as well as developed general interest in the subjects discussed. Nothing that was loaned received, so far as I know, any material damage, and at the end of the school-vacation the room was cleared without any inconvenience having resulted.

There are probably few towns in which, under the management of a responsible committee, and with a few months for preparation, a very fair loan collection could not be got together, and few in which there are not those who, some in one subject and some in another, are competent to give a certain amount of instruction. Although it is desirable to exhibit also pictures, books, and permanent objects, yet I feel sure that the best educational work would be in the collection and examination of recent and local objects. If such a museum were a yearly recurring institution, the zeal of collectors would no doubt continue through the year, and each successive exhibition might be expected to surpass its predecessors. The practice of making drawings of the objects shown should be sedulously encouraged, and if the funds admitted, a few small prizes might be suitably offered to young collectors and draughtsmen.

A few words must be said in conclusion as to our Book-room and Picture and Portrait-gallery. These are not essential features of an educational museum; but they are very useful and attractive. Our book-room at Haslemere contains a large supply of books and maps, nearly all second-hand, and most of them purchased economically. The collection of engraved portraits is of very considerable extent, and they have been arranged in glass-topped boxes and classified, so as to be easy of access. We have also a few good portraits in oils. About one-half of the wall-space in the book-room is devoted to historical portraits, and the other half to pictures as works of art. No books are loaned from the collection, but readers are admitted without charge, and the shelves are all open.

In the course of the next six months an Institute on the plan of the Haslemere Educational Museum will probably be opened at Selby, in Yorkshire. The premises have already been obtained. Some of the features of the Haslemere Museum will probably be improved upon as the result of the experience which has been there gained. As the premises at Selby are in a street, and are restricted as to extent, what will be done there may perhaps afford a better example of what is practicable under similar circumstances than does the Haslemere Institution. At Haslemere there has been no limit as to ground space. The plan of building there adopted may be recommended for country places where land is cheap, and that at Selby for towns where it is not so.

In claiming the term "Educational" in some special sense for Museums formed on these models, I have no wish to ignore or undervalue what has been done by others in the same direction. Many excellent educational museums have been formed, some in connection with large schools and colleges, others with free libraries, and others by private committees in provincial towns. The Haslemere Institution has, however, I think, some distinctive features, and is better adapted to serve as an adjunct and help to school-training than any of its predecessors. Chief amongst these features is its wide scope. No branch of knowledge which is susceptible of illustration by models, maps, portraits, or specimens, has been purposely left out. Human history and modern geography are illustrated side by side with the geological record of the earth's formation and the botanical and zoological developments of life. Although several branches—astronomy, for instance—have as yet received but little attention, they are all contemplated in the programme. The design is to omit nothing which a schoolmaster, taking his pupils there, might hope to find.

A second special feature is the use of the wall space for the construction of large permanent diagrams or schedules. These wall-schedules require much space, and could not be copied unless it were obtainable. They have been printed in order to facilitate their reproduction, but in this compressed form their utility is not to be compared with that of the originals. These wall-schedules afford the best opportunity for the orderly and instructive arrangement not only of geological specimens, but of portraits, coins, and other documents relating to the history of man.

A third special feature is that books, maps, drawings, and specimens are brought, whenever it has seemed desirable, into close juxtaposition, and that visitors are encouraged to sit down, read, and take notes. The labels provided are in many instances much more detailed than are usually found in museums. The idea in this is that museums can only find their proper place in the educational scheme when they are regarded as places for study, and not merely for a casual visit. As helping in this direction many inexpensive specimens, and those not susceptible of injury, have been left exposed on the tables, and instead of the usual "Do not touch," visitors are encouraged to handle them and make detailed inspection.

A third feature may perhaps be found in the fact that no attempt is made to stereotype the collection, or to systematise in too much detail. Many specimens and labels, etc., are frequently changed. There are large collections of store specimens which are used for this purpose.

Finally, it may be added that the giving of explanatory lectures, based chiefly on the contents of the museum, has been found very useful in assisting its educational aims. In these lectures, as in the museum itself, the widest scope has been taken, the endeavour having been to avoid specialism, and to show that the different branches of human knowledge are mutually related and concern all. With this aim several short lectures on different subjects have usually been given during the same afternoon. The following Reprint of the Programme for the summer lectures (mostly given out of doors) for 1896 may serve to show how moderate the expenditure was in the present instance.

JONATHAN HUTCHINSON.

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*Note.*—During its early years the Haslemere Museum had no Curator. For nearly a year past Mr. E. W. Swanton has acted in that capacity, and to his zealous services the collection has been indebted for many improvements. It is now open every week day and on all Sunday afternoons.

As regards the *Schedule of Geological Times*, which is to follow, I am most anxious, even at the risk of some repetition, to explain that it makes no pretence to more than approximative accuracy. The state of our knowledge is not, and probably never will be, such as to justify us in allotting the periods of Geological time with precision. The object of this Schedule is to aid the imagination of the uneducated in realising the immense periods of time which have elapsed during the formation of that portion of the Earth's Crust which contains evidence of living organisms, and also to give some rough guide to the relative length of the several stages into which those periods have been classified. In demonstrating the Schedule I have always been most careful to explain that it has no claim to be authentic, and there may easily be in it many inaccuracies; at the same time, I have always ventured to add, there is certainly no exaggeration. Those who have walked with me the length of the Schedule and heard it explained, have often assured me that they had found it very helpful in obtaining clear views. More especially is it calculated to bring into clear prominence the brevity of the period with which human history deals as contrasted with that concerned in the whole zoological record.

The usefulness of this Schedule does not, however, quite end with the object just referred to. The shelves beneath the several Columns offer an excellent opportunity for the orderly arrangement of such fossils as the Museum may possess. New acquisitions can be at once put in their proper place. It is always assumed in an Educational Museum that the object of a geological department is not so much to give to a few the means of acquiring detailed knowledge, as to impress upon the many in a vivid manner the great facts as to time and space in their relation to the globe on which we live.



COPY OF THE SUMMER PROGRAMME FOR 1896  
OF THE  
EDUCATIONAL MUSEUM, HASLEMERE.

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Mr. J. HUTCHINSON requests the company of all who may incline to attend on any of the occasions mentioned below. The Museum will be open (free) every Saturday from 10 to 6, and every Sunday from 2 to 6. On other days (to adults only) on application to the Custodian, Miss LUNN, East Street.

**Saturday, June 6th.**

A CLASS for the YOUNG, 4 to 5.

**Sunday, June 7th, 3 to 5.**

## LECTURES :—

The Thickness of the Earth's Crust.  
The Moa and the Aepyornis.  
Elephants.  
John Wesley.

**Saturday, June 20th.**

A CLASS for the YOUNG, 4 to 5.

**Sunday, June 21st, 3 to 5.**

## LECTURES :—

The probable Age of the World.  
Man before History.  
The Potato.  
George Fox.

**Saturday, July 4th.**

A CLASS for the YOUNG, 4 to 5.

**Sunday, July 5th.**

## LECTURES :—

Earliest Traces of Life.  
Animal or Vegetable.  
Fruits and Seeds.  
Alfred the Great.

**Saturday, July 18th.**

A CLASS for the YOUNG, 4 to 5.

**Sunday, July 19th.**

## LECTURES :—

The earliest Traces of Man.  
Indian Corn.  
Seaside Objects.  
Cowper and his Poetry.

**Saturday, August 1st.**

A CLASS for the YOUNG, 4 to 5.

**Sunday, August 2nd.**

## LECTURES :—

The Geology of Haslemere.  
Galls and Pearls.  
Albinos.  
Albert Dürer.

**Saturday, August 15th.**

A CLASS for the YOUNG, 4 to 5.

**Sunday, August 16th.**

## LECTURES :—

Coal and the Coal Strata.  
Snakes and Reptiles.  
Wings and Flying.  
John Milton.

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STATEMENT OF COST OF  
THE HASLEMERE EDUCATIONAL MUSEUM.

As it is most important that an Educational Museum should have plenty of room the following details as to cost are offered in order to show how moderate the expenditure was in the present instance. They are supplied by the Architect and Builder, Mr. Herbert Hutchinson of Haslemere.

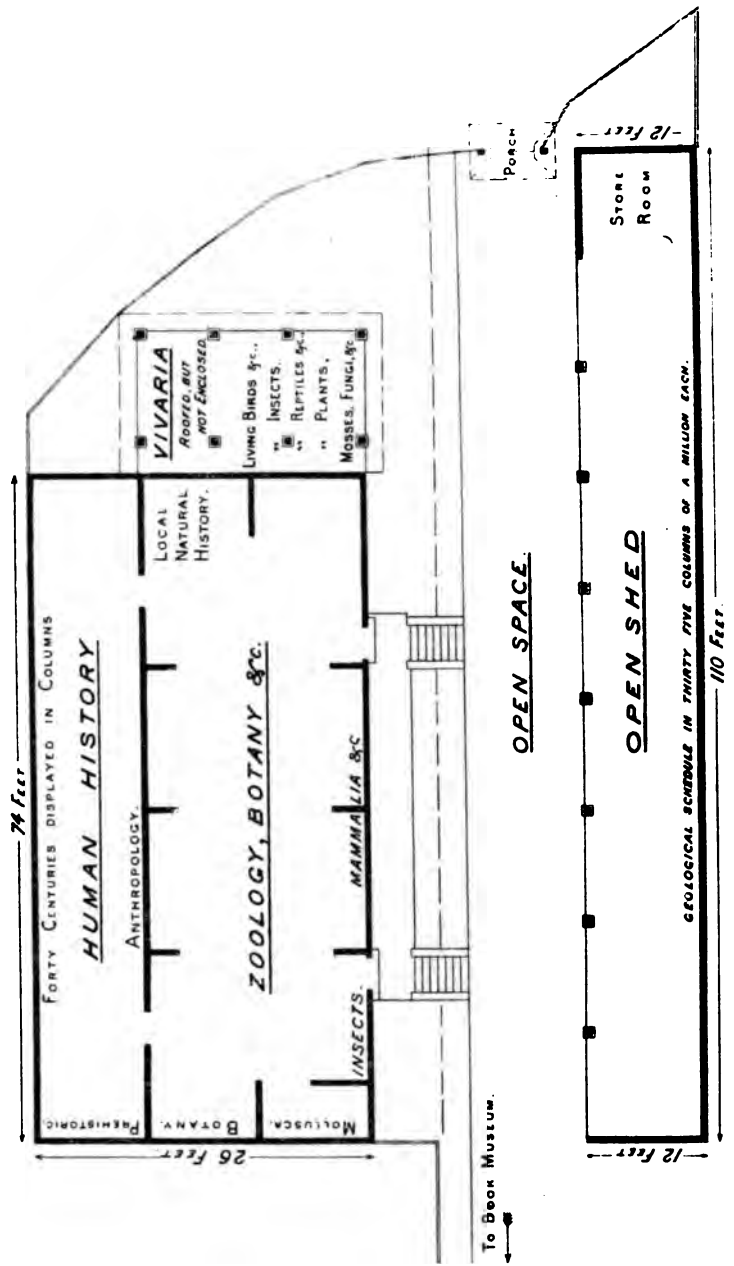
	Total Cost, including all Expenses connected.
	£
Natural History Museum and Historical Gallery, and Geological Gallery - - - - -	636
Fence, Paving to Yard and Entrance Gateway, &c. -	63
Open Shed (Vivarium), &c. adjoining above - -	51
Book Museum, including Fence, Path, Bookcases and Shelves, &c. - - - - -	555
Total - - -	1,305

	Sq. ft.
Floor Space.—Natural History Museum - -	1,728
Historical Gallery - - -	864
Geological Gallery (not floored) -	1,296
Open Shed (not floored) - -	442
Book Museum - - - -	2,088
Total floored and inclosed =	4,680 Sq. ft.
Total roofed but not floored =	1,738 „

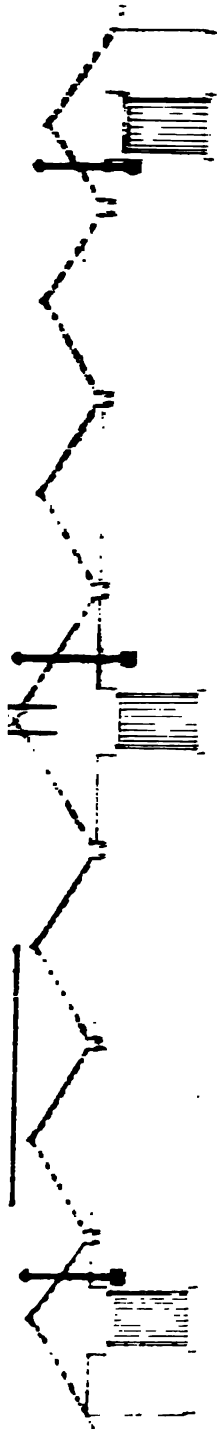




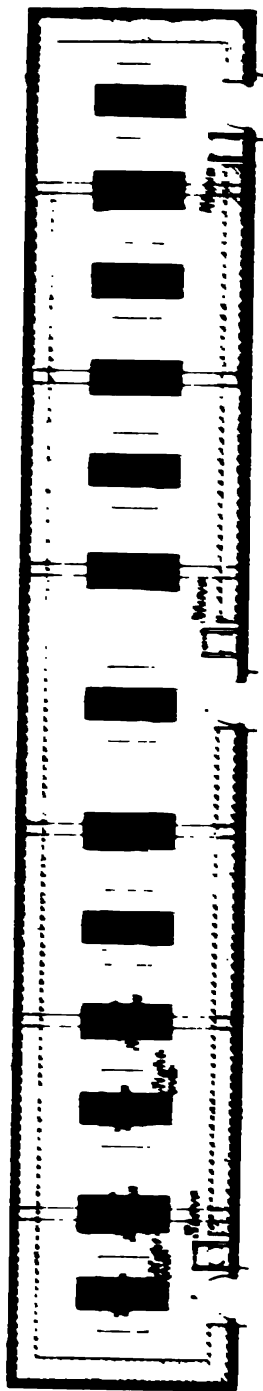
# **HASLEMERE EDUCATIONAL MUSEUM.** **MAIN BUILDING.**







ELEVATION.



PLAN.

- NOTES ON MATERIALS AND CONSTRUCTION**
- WALLS** Timber framing covered with weather boarding coated with clear linum and painted in black
- ROOF** Galvanized
- FLOOR** board and beam painted red. match
- LINING** Deal boards one inch thick nailed to edge beams
- HEATING** covered in cement concrete.
- FITTINGS** Thin match boarding to all walls (No plaster). By three warm air pipes (Hot air heated). Flood, cupboards under the beams during both ways. Board, tables and others in order of compartments. Board, tables for show cases and drawers round the walls



SITE PLAN.





SCHEDULE of GEOLOGICAL HISTORY on the "Space-for-Time" Method as arranged (with Shelves, &c.), on Wall of out-of-door Shed at the Haslemere Educational Museum (considerably reduced in size).

AN INDEFINITE PERIOD OF TIME.	THIRTY - FIRST MILLION, B.C. PRIMARY.	THIRTIETH MILLION, B.C. PRIMARY.
ARCHÆAN (48,000).	CAMBRIAN.	CAMBRIAN.
Period of origin of Life on the Earth.	Seaweeds.  Sponges.	
Doubtful remains of Foraminifera and of Plants (changed into Graphite).	Hydrozoa (Graptolite).  Corals.  Annelids.  Cystideans.  Crinoids.  Asteroids.  Crustacea (Trilobites).  Mollusca (Polyzoa, Brachiopods, Pteropods, Gasteropods, Tetra-branchiates, Cephalopods, Lamellibranchi-ates).  [REPRESENTATIVES of all these are continued through the subse- quent MILLIONS.]	Sponges.  Foraminifera.  Corals.    Brachiopods.    Trilobites.   Crinoids.   Star-fishes   Bivalves and other Mol- luscs of every class.   Graphite and Iron Ores (probably due to plants).
1545.		T 2





SCHEDULE, &c., Haslemere Educational Museum—*continued.*

TWENTY-SIXTH MILLION, B.C. PRIMARY.	TWENTY-FIFTH MILLION, B.C. PRIMARY.	TWENTY-FOURTH MILLION, B.C. PRIMARY.
CAMBRIAN.	CAMBRIAN.	SILURIAN—LOWER.
Sponges, &c. &c. &c.	Sponges, &c. &c. &c.	Sponges, &c. &c. &c.

**SCHEDULE, &c., Haslemere Educational Museum—continued.**

TWENTY-THIRD MILLION, B.C. PRIMARY.	TWENTY-SECOND MILLION, B.C. PRIMARY.	TWENTY-FIRST MILLION, B.C. PRIMARY.
SILURIAN—LOWER.	SILURIAN—UPPER.	DEVONIAN.
Sponges, &c. &c. &c.	Sponges, &c. &c. &c.	Sponges, &c. &c. &c.

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

TWENTIETH MILLION, B.C. PRIMARY.	NINETEENTH MILLION, B.C. PRIMARY.	EIGHTEENTH MILLION B.C. PRIMARY.
DEVONIAN.	DEVONIAN (including the Old Red Sandstone).	DEVONIAN (including the Old Red Sandstone).
Sponges, &c. &c. &c.	Lower Devonian.	•  Lower Devonian.
Fishes very abundant.	An abundant Flora (Cryptogamic.)	Sponges, corals, &c. &c.
	A marine fauna, Bra- chiopods, make three- fourths of the whole.	Fishes.
	Corals varied and abun- dant ; none of them of the same species as those in the Silurian below or Carbonifer- ous above.	Brachiopods, &c. &c.
No land animals found up to this date except- ing a Scorpion.	Crustaceans common.  Molluscs common.	



**SCHEDULE, &c., Haslemere Educational Museum—continued**

SEVENTEENTH MILLION, B.C. PRIMARY.	SIXTEENTH MILLION, B.C. PRIMARY.	FIFTEENTH MILLION, B.C. PRIMARY.
DEVONIAN (including the Old Red Sandstone).	DEVONIAN (including the Old Red Sandstone).	DEVONIAN (including the Old Red Sandstone).
Middle Devonian.	Middle Devonian.	Upper Devonian.
Fishes.	Fishes.	Fishes.
Brachiopods, &c. &c.	Brachiopods, &c. &c.	Sponges, &c. &c.

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

FOURTEENTH MILLION, B.C. PRIMARY.	THIRTEENTH MILLION, B.C. PRIMARY.	TWELFTH MILLION, B.C. PRIMARY.
DEVONIAN (including the Old Red Sandstone).	CARBONIFEROUS.	CARBONIFEROUS.
Upper Devonian.	Fishes, &c. &c.	
The Old Red Sandstone (inland seas), some- times reaches a depth of 20,000 ft.	Ferns.	Ferns.
	Cycads.	Cycads, &c. &c.
	Calamites.	
Fishes in great abun- dance.		
Ferns.	Lycopods.	
Lycopods.	Conifers.	
A few Conifers.		
A few Dicotyledenous Trees.		
Neuropterous Insects.		

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

ELEVENTH MILLION, B.C. PRIMARY.	TENTH MILLION, B.C. PRIMARY.	NINTH MILLION, B.C. PRIMARY.
CARBONIFEROUS.	COAL MEASURES.	COAL MEASURES AND PERMIAN.
Sponges, &c.	Sponges, &c.	Sponges, &c.
Fishes, &c.	Fishes, &c.	Fishes, &c.
Ferns, Cycads, &c	Ferns, &c. &c.	Ferns, Conifers, &c. &c.
		<p>Inland Seas or large Salt Lakes.</p> <p>The advent of Reptiles.</p> <p>Permian System (or Dyas).</p> <p>Horizontal strata of this age cover much of Russia.</p> <p>Lower Red Sandstone.</p> <p>Magnesian Limestone.</p>



SCHEDULE, &c., Haslemere Educational Museum—*continued.*

EIGHTH MILLION, B.C. SECONDARY.	SEVENTH MILLION, B.C. SECONDARY.	SIXTH MILLION, B.C. SECONDARY.
<p>TRIASSIC (formerly New Red).</p> <p>The fauna forms a connecting link between primary and secondary.</p> <p>Here begin the Mesozoic or Middle Forms of Life.</p> <p>Land Plants.</p> <p>Labyrinthodon Reptiles (frog-like).</p> <p>Ammonites.</p> <p>Nautilus.</p> <p>Fishes with skeletons of true bone.</p> <p>Lower Trias, or Bunter.</p> <p>Supposed footprints of Birds.</p> <p>Middle Trias ("Muschelkalk").</p> <p>Rich in Marine fossils, encrinurites, &amp;c.</p> <p>Upper Trias, or Keuper.</p> <p>Earliest Mammalian remains (Microlestes, a small marsupial).</p> <p>Rhoetic Beds ("White Lias"). Very thick in the Rhoetic Alps, but thin in most other districts.</p>	<p>TRIASSIC AND JURASSIC (including Lias and Lower Oolite).</p> <p>Lias. "The age of Reptiles." Belemnites (69 species). Ammonites (30 species). Nautilus (10 species).</p> <p>Lower Lias.</p> <p>Am : raricostatus, obtusus, angulatus, &amp;c.</p> <p>Marlstone (150). Am : spinatus margaritatus.</p> <p>The earliest Monocotyledons.</p> <p>Upper Lias.</p> <p>Zones of Ammonites.</p> <p>Am : Jurensis, communis and serpentinus.</p> <p>Ichthyosaurus and Plesiosaurus.</p> <p>Inferior Oolite (pisolite marl, &amp;c.)</p> <p>Fuller's Earth.</p> <p>Stonesfield Slate.</p> <p>Great Oolite. Bath Oolite.</p> <p>Forest Marble and Bradford Clay.</p> <p>Cornbrash.</p>	<p>JURASSIC AND CRETACEOUS (including Middle and Upper Oolite).</p> <p>Kelloway Rock.</p> <p>Oxford Clay.</p> <p>Corallian Oolite. "Coral Rag."</p> <p>Earliest Bird remains, Solenhofen.</p> <p>Kimmeridge Clay. [This and the two following are in what is known as the <i>Upper Oolite</i>.]</p> <p>Portland Rock.</p> <p>Purbeck Beds.</p>

SCHEDULE, &c.—Haslemere Educational Museum—*continued.*

FIFTH MILLION, B.C. SECONDARY.	FOURTH MILLION, B.C. SECONDARY.	THIRD MILLION, B.C. TERTIARY.
CRETACEOUS.	CRETACEOUS.	LOWER EOCENE. (Era of dicotyledonous Plants, Birds, and Mammals.)
Hastings Sand. Tunbridge Wells Sand.	Lower Chalk. Turonian (without flints).	Woolwich and Reading Beds.
Weald Clay (Estuarine). Lower Greensand. Atherfield Clay.	Abundant Ammonites, Echinoderms, Molluscs, Fishes, Sponges, &c. &c.	The lowest London Ter- tiaries.
Hythe Beds (Haslemere district).		The London basin, the Hampshire and Paris basins, were now filled with their clays, gravels, and limestones.
Sandgate Beds.		
Folkestone Beds.	Chalk Marl.	London Clay and Bognor Beds.
Speeton Clay.		The earliest known non- marsupial Mammals (Palæotherium).
Gault (a stiff iron clay, with many ammonites).		
Upper Greensand.	Upper Chalk. Senonian (with flints).	Lower Bagshot Beds.
Chloritic Marl.		
Chalk Marl. [Chalk is solidified mud, chiefly made up of foraminifera, and was formed in deep seas.]	Mæstricht Beds 110. Yellow Chalk. The first dicotyledon (at Aachen).	Middle Bagshot Beds.
Lower Chalk (no flints).	A great break occurs here, and a long period of time is unrep- resented by strata.	Nummulitic (Middle Eocene) period.

SCHEDULE, &c.—Haslemere Educational Museum—*continued.*

SECOND MILLION, B.C. TERTIARY.	FIRST MILLION, B.C. AND A.D. TERTIARY AND QUATERNARY.
UPPER EOCENE AND MIOCENE. (Era of dicotyledonous Plants, Birds, Mammals, and Apes.)	UPPER EOCENE, MIOCENE, PLIOCENE, &c. (Era of dicotyledonous Plants, Birds, Mammals, Apes, and Man.)
North Bagshot Sands.	Hempstead Beds.
	Bovey.
The Nummulitic limestone was now laid down which forms the heights of the Alps, and extends across Europe and Asia from the Pyrenees to Japan. (Middle Eocene).	Suffolk Crag (White Crag). (750,000 B.C.)
	Red Crag. (Fusus contrarius.)
Upper Bagshot Beds.	Mammaliferous Crag.
	Forest Bed of Cromer.
	Mammoth and Mastodon.
	Rhinoceros, Hippopotamus. 500,000 B.C.
Bembridge Beds.	Pleistocene and Glacial Period.
	Britain and North Europe under a sheet of ice. 250,000 B.C.
Barton Beds (fluvio-marine).	
Headon Beds.	Probable existence of well-developed Man.
	Deposits of the chalky boulder clay in our Eastern counties.
Bembridge Beds (limestone).	(125,000 B.C.)
Miocene (lake-deposits) contain remains of huge mammals, the Dinotherium and Mastodon. Also the Ass and True Apes, rich Floras, and numerous Insects.	(Man and Domestic Animals.)
[The Mammalian species of this period are all now extinct, but many genera survive.	Historical Time begins.
	Birth of Christ.
	ANNO DOMINI 1898.



A SCHEDULE of HISTORY on the "Space-for-Time" Method as arranged on the North Wall of the Haslemere Educational Museum (considerably reduced in size). For explanations and more details *see* "The Centuries."

40th Century B.C.	39th Century B.C.	38th Century B.C.	37th Century B.C.
Egypt, India, China, and Phœnicia, were all well advanced in civilisation.  It is conjectured that Egyptian civilisation had been in progress at least 2,000 years.			
Fourth Egyptian Dynasty. Sneferu, Khufu and Khafra. The first two Pyramids; the Sphinx.			
	Menkaura.	Fifth Dynasty.	
	Third Pyramid.		
THE EARLY DATES CLAIM ONLY TO BE CORRECT WITHIN 100 YEARS.			
61st Century.	62nd Century.	63rd Century.	64th Century.

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

36th Century B.C.	35th Century B.C.	34th Century B.C.	33rd Century B.C.
	Sixth Dynasty.		Seventh Dynasty.
	Memphis still the seat of the Egyptian Government.		
65th Century.	66th Century	67th Century.	68th Century.

SCHEDULE, &c., Haslemere Educational Museum--*continued.*

32nd Century B.C.	31st Century B.C.	30th Century B.C.	29th Century B.C.
		Eleventh Dynasty, Antef II.	Egyptian Govern- ment moved to Thebes.
[The dates of Dy- nasties VII.—X. cannot be accu- rately placed. During this period an unknown peo- ple, probably Lib- yans, entirely dispossessed the Egyptians.]		The Egyptians founded colonies in Sinai.	Antef V.
			Mentuhotep III.
69th Century.	70th Century.	71st Century	72nd Century.



SCHEDULE, &c., Haslemere Educational Museum—continued.

28th Century B.C.	27th Century B.C.	26th Century B.C.	25th Century B.C.
Sargon, King of Babylonia.			
Twelfth Dynasty, Amenemhat I.	Usertesen II.		
		Thirteenth Dy- nasty. (History of Egypt very obscure until Seventeenth Dy- nasty.)	
Usertesen I.	Usertesen III.		
		Elam. (Susa had at this time poli- tical constitu- tion.)	
	Amenemhat III.		
Amenemhat II.			Neferhotep.
73rd Century.	74th Century.	75th Century.	76th Century.
1545.			U

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

24th Century B.C.	23rd Century B.C.	22nd Century B.C.	21st Century B.C.
			The Hyksos begin to harass the Egyptians.
	Elam becomes important.		
		Nineveh founded (?)	
		Nehesi, "the Negro."	
Golden Age of ancient China.			
		Fourteenth Dynasty.	
77th Century.	78th Century.	79th Century.	80th Century

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

20th Century B.C.	<b>ABRAHAM.</b> 19th Century B.C.	<b>JACOB.</b> 18th Century B.C.	<b>JOSEPH.</b> 17th Century B.C.
Fifteenth Dynasty. Hyksos or Shepherd Kings.	Apepa I.	Jacob.	
Birth of Abraham(?)	Abraham.		
Hammurabi and Sarrukin.	Babylonian civili- sation.		Nubti.
		Prosperity of Phœ- nicia.	Joseph sold into Egypt.
	Inachus founds Argos in Greece.		Apepa II.
	Isaac, aet. 40, marries Rebekah.		The Hebrews set- tled in Goshen.
		Commencement of revolt against the Hyksos.	
Celts reach shores of Europe (?)			
Chedorlaomer, King of Elam, about this time.			
Sidon famous for her manufactures.			
Sixteenth Dynasty.		Greeks settle in Italy.	
81st Century.	82nd Century.	83rd Century.	84th Century.



SCHEDULE, &c., Haslemere Educational Museum—*continued.*

CADMUS. 16th Century B.C.	TUTHMOSIS. 15th Century B.C.	SETI. 14th Century B.C.	SESOSTRIS. 13th Century B.C.
Eighteenth Dy- nasty.  Complete expul- sion of Hyksos by Amasis (Aahmes).	Hatshepsut.  Assyria an inde- pendent State.	Amenhotep IV.	
Cecrops founds Athens.	Tuthmosis III.	Egypt and Phœ- nicia prosperous.	Ramesis II. (Se- sostris).
			Assyrians cap- ture Babylon.
Egyptian cam- paigns in Asia.	Assyria, Phœnicia, and Egypt pros- perous.		Siege of Troy (?)
Cadmus founds Thebes.		Nineteenth Dy- nasty. Seti (Sethos).	Moses.
	Amenhotep III.		
The dates of the Egyptian dy- nasties cannot be given with precision until the XVIIIth dynasty (85th Century).	Hindoos settle by the Ganges.		
85th Century.	86th Century.	87th Century.	88th Century

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

<b>MOSES.</b> 12th Century B.C.	<b>DAVID.</b> 11th Century B.C.	<b>SOLOMON.</b> 10th Century B.C.	<b>DIDO.</b> 9th Century B.C.
		Hiram, Homer, Solomon.	Assyria still pros- perous.
The Exodus.	Prosperity of Israel and Phœnicia.		
Joshua.			Jehu, Athaliah.
Israelites in Sinai and in Palestine.		Shisak sacks Jeru- salem.	
	Saul and David.		Dido.
	Solomon.	Hesiod.	Lycurgus.
Dorian Migration.		Ahab, Jezebel, Eli- jah, Zoroaster.	
89th Century.	90th Century.	91st Century.	92nd Century.

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

ROMULUS. 8th Century B.C.		DRACO. 7th Century B.C.		CYRUS. 6th Century B.C.	SOCRATES. 5th Century B.C.
Tiglath (Pul).	Pileser	Early Kings.	Roman	Solon.	Marathon.
				Nebuchadnezzar carries Judah to Babylon.	Xerxes.
The first Olympiad.					Thermopylæ and Salamis.
				Daniel.	
Isaiah.					Decemvirs at Rome.
Beginning of Rome.				Buddha.	Æschylus, Sopho- cles, Euripides and Aristophanes.
				Cyrus founds Per- sian Empire.	The Age of Peri- cles.
				Return of Jews.	
Hezekiah.				Darius.	Peloponnesian War.
		Legislation Draco.	of		
Dispersion of the Ten Tribes.				Expulsion of the Tarquins.	Golden Age of Athens.
		Fall of Nineveh. "New Baby- lonian Empire."		Confucius.	The Thirty Ty- rants at Athens.
93rd Century.		94th Century.		95th Century.	96th Century.



SCHEDULE, &c., Haslemere Educational Museum—*continued.*

<b>ALEXANDER.</b> 4th Century B.C.	<b>HANNIBAL.</b> 3rd Century B.C.	<b>SCIPIO.</b> 2nd Century B.C.	<b>CÆSAR.</b> 1st Century B.C.
Death of Socrates. Plato.	Carthage prosperous.	Plautus.	
	Romans now the chief people in Italy:		Social War. Marius and Sulla.
	Alexandrine learning.		
Hegemony of Thebes.			
"Licinian Rogations."		The Maccabees.	Pompey, Cæsar, Crassus.
	Decline of Greece and advance of Rome.	Corinth and Carthage taken by the Romans.	Antony, Octavianus, Lepidus.
Aristotle.			
Alexander succeeds Philip.			Battle of Actium. Augustus.
		The Gracchi.	
Wars of "Diadochi."	Hannibal invades Italy.		Horace, Virgil, Ovid, Livy.
		Jugurthine War. Marius.	<i>Birth of Christ</i> (97).
	Battle of Zama.		
97th Century.	98th Century.	99th Century.	100th Century.

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

<b>PAUL.</b> 1st Century A.D.	<b>TRAJAN.</b> 2nd Century A.D.	<b>ZENOBLA.</b> 3rd Century A.D.	<b>CONSTANTINE.</b> 4th Century A.D.
<i>Christian Era.</i>	The best days of Rome.	Prosperity of Persia.	Constantine.
Tiberius.	Trajan.		
	Hadrian.		
		Ardeshir (Artaxerxes) "New Persian Empire."	Council of Nicæa, Arius.
<i>Crucifixion, (31).</i>	Antoninus.		
		Decline of Rome	
Paul's first journey.			
Conquest of Britain.			
Nero			Julian.
			Scots, Picts, and Saxons attack Britain.
Flavian emperors.		Christian persecutions.	Ulphilas.
Titus sacks Jerusalem.		Zenobia captive.	Goths under Alaric.
	Germans cross the frontier.		Theodosius.
		Diocletian.	Christianity Triumphant.
Trajan.			
101st Century.	102nd Century	103rd Century	104th Century.

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

ATTILA. 5th Century A.D.	GREGORY. 6th Century A.D.	MAHOMET. 7th Century A.D.	CHARLES. 8th Century A.D.
	Commencement of MIDDLE AGES.		Moorish con- quests.
Alaric. Sieges of Rome.	English conquest. King Arthur.	Mahomet com- poses the Koran.	
	Clovis.		Leo the Isaurian. The Iconoclasts.
Visigoths settled round Toulouse.		The Hegira.	
	Justinian.		Martel. Battle of Tours.
Vandals in Africa. Gaiseric.	Totila, Belisarius, Narses, Chesa- roes.	Battle of Nehavend.	
Attila the Hun. Hengist lands in Kent.		Growth of the claims of the Pa- pacy.	Kingdom of Cor- dova founded.
			Charlemagne.
Odoacer, Clovis, Theodoric.	Mahomet. Gregory the Great, Pope.	Bede. Pepin d'Heristal.	Haroun al Ras- chid.
	Augustine.		Charlemagne crowned at Rome.
105th Century.	106th Century.	107th Century.	108th Century.



SCHEDULE, &c., Haslemere Educational Museum—*continued.*

<b>ALFRED.</b> 9th Century A.D.	<b>OTTO.</b> 10th Century A.D.	<b>HILDEBRAND.</b> 11th Century A.D.	<b>BERNARD.</b> 12th Century A.D.
Charlemagne, Egbert.	Rollo.		Henry I.
Separation of Eastern from Western Church.		Canute.	Saracenic conquests.
	Athelstan.		Stephen.
			St. Bernard.
Treaty of Verdun.			Second Crusade.
Saracen culture.			Frederic Barbarossa.
	The three Ottos.	The Conqueror.	
Alfred.		Peter the Hermit.	Murder of Becket.
Northmen ravage Europe.	Ethelred the Unready.	Hildebrand.	
	Hugh Capet.		Third Crusade.
Danes settle in England.		First Crusade.	Richard. Saladin.
109th Century.	110th Century.	111th Century.	112th Century.

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

<b>LOUIS.</b> 13th Century A.D.	<b>DANTE.</b> 14th Century A.D.	<b>COLUMBUS.</b> 15th Century A.D.	<b>LUTHER.</b> 16th Century A.D.
Genghis Khan.	Dante.		
	Popes at Avignon.		Henry VIII.
Magna Charta.		Henry V.	
Henry III.			Luther. Emperor Charles V.
St. Louis.	Edward III.		
Fifth Crusade.		Joan of Arc.	
	Hundred Years' War.	Printing.	
	Wickliff.		
	Black Death.	Fall of Constantinople.	
		Wars of Roses.	
De Montfort's Parliament.	Chaucer.		Elizabeth.
Edward I.			
	Richard II.		
		Renaissance and Reformation. Art.	
		Henry VII.	Armada.
Bull "Clericis Laicos."			Shakespeare.
		America discovered.	
113th Century.	114th Century.	115th Century.	116th Century.

SCHEDULE, &c., Haslemere Educational Museum—*continued.*

<b>MILTON.</b>	<b>WASHINGTON.</b>	<b>VICTORIA.</b>	
17th Century A.D.	18th Century A.D.	19th Century A.D.	20th Century A.D.
	Charles XII.	George III.	
		Waterloo.	
		Wordsworth.	
Shakespeare dies.	Peace of Utrecht		
Bacon.			
		Reform Bill.	
		Victoria.	
		Penny Postage.	
		Repeal of Corn Laws.	
Louis XIV.	Frederick the Great.	Darwin.	
Peace of Westphalia.		Napoleon III.	
Commonwealth.		Tennyson.	
		Crimean War.	
Milton.	Seven Years' War.	Indian Mutiny.	
Restoration.	Clive.	Browning.	
		Suez Canal.	
	War of American Independence.		
Peter the Great.	French Revolution.		
		Diamond Jubilee.	
	Napoleon.	Sudan War.	
Peace of Ryswick			
117th Century.	118th Century.	119th Century.	120th Century.



### School Plays in Latin and Greek.

An historical study, with some observations on the educational value of acting, and on the recent revival of Greek Drama in Schools.

ANYONE who has watched children at play will have realised the strength of the dramatic instinct and the universality of make-believe. There is no wonder, therefore, that the drama has long been regarded as a formative influence in education, if only for the zeal with which it is entered on and the zest with which it is carried out. The aim of the following paper is to discuss the value, as a part of the teaching of classical languages, of those School Plays which are drawn from the literature of Greece and Rome. Closely connected as the two classical languages may appear, I have thought it better to keep their dramatic traditions distinct.

It will probably appear that the acting of Latin Plays dates from those early days when Latin was the common language of educated Europe, and that they had their origin wholly under the influence, and largely in the actual service, of the Church, the authority of which over the common citizen in the Middle Ages it is not easy now to realise. She was with him from birth to death, the one constant witness of another world, the one break in an often pitiless environment; she fed his body, catered for his mind, and saved his soul; she stood to him for something which no failure of spiritual power, no inconsistency of life, no grotesqueness of outward circumstance could destroy. Hence it comes that the phraseology of the law, the technicalities of science, the courtesies of diplomacy, the text of school books were long in the language she adopted as her own. And if the language of the Church has gradually and naturally permeated the utterance of the outer world, it was artificially and forcibly maintained in the miniature world of school. By the will of the founder of a school\* dating from early Stuart days the one offence for which summary and condign punishment could be exacted by the ushers was the speaking of English within the precincts of the Latin school. Hence it seems likely that the first Latin plays which were acted in schools were not the direct outcome of an educational effort, but rather the natural result of the omnipresence of the Latin language as the language of formal utterance and occasion.

Through various vicissitudes the Latin dramatic tradition may be fairly well traced down to our own times. In the Middle Ages it was, as we have indicated, a natural accompaniment of the Latin monastic education. Altered in character at the Reformation and further checked by the Puritanism of the Commonwealth, it found a highly favourable atmosphere in the classic

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\* Archbishop Harsnet's School, Chigwell.

spirit of the eighteenth century. It was checked again by the Philistinism which marked the heroic age of Victorian education, and further weakened by the diffusion of interest consequent upon the widening of educational curricula; but it has survived throughout, to take one honoured instance, in the Westminster Play, and shows in our own day signs of further renaissance under the liberalising spirit and the necessitous advertising which seem the hall-marks for good and ill of education in England to-day.

The rise of Latin Drama, other than classical, is lost in the development of Christianity out of Paganism. Perhaps, as Goethe suggested,\* the first Christian religious drama was the chanting of the Gospel for Palm Sunday, which he reproduces in a dramatic form, in which the parts are regularly assigned to the officiating clergy, the answers of the Turba being given by the servers and laity present. We find,† at any rate, that towards the close of the tenth century there were acted at Gandersheim six plays in Latin written by a nun, Roswitha, an inmate of the convent. It will not be forgotten in this connection that the practice of rendering women's parts by women is a modern one, dating in England from the Restoration, and that these and similar plays were performed entirely by men and boys. The principal characters were, we know, taken by the priests: the boys were presumably members of the community in some sort, and it is not unreasonable to suppose that they were chosen from the scholars of the monastic schools. In the year 1110 there was acted at the school attached to the Abbey of Dunstable a Latin play, the subject of which was the Life of S. Catherine. It was composed by the master of the school—one Geoffrey, a Norman—and was rendered by his scholars. As a curious instance of the close connection in these early days of Church and stage it may be noted that the properties in this case were furnished from the Abbey church, being in fact the vestments habitually there used.

The plays referred to were in Latin, but the great miracle dramas of the later middle ages were, both in England and on the Continent, in the language of the people. The reason for this change doubtless lay in the concentration of learning within the monastic walls, and the necessity that arose, when the fervour of missionary effort had grown cold, of providing some popular and easily intelligible means of teaching the historic facts of religion and the dogmas enshrined in them. But I believe its immediate cause may be found in the *Asinaria Festa* and *Fêtes des Foux*, which form so singular and so ugly a page in Church history.

Conceivably the Church felt the need of a counter-attraction to these Saturnalia, and found it in such plays as the *Chester Mysteries* and the *Ludus Conventricæ*, which were acted in the fourteenth and fifteenth centuries in England, and in the colossal *Passion Mysteries* and *Mysteries of the Acts of the Apostles* of

\* O. Wenckstern's "Goethe's Opinions on the World, Mankind, Literatur Science and Art." London: 1853, p. 122.

† *Blackwood*, vol. cvi., p. 671: "Mysteries and Passion Plays."



France a hundred years later. I note these because their preposterous proportions and requirements make it in the highest degree unlikely that any dramatic tradition, other than this, was contemporaneously maintained in the monastic houses, especially if I am right in supposing that from these were largely recruited the Fraternity of the Passion in France and the Gonfalone in Italy, on whom the production of these and similar plays devolved. A play of 66,000 lines, the representation of which without repetition lasted for forty days, and employed in some capacity or other the whole of the inhabitants of the town in which it was acted, might fairly be considered to exhaust the dramatic talent of the community.\*

Something of the same absorption of interest was in process in England when our forefathers were flocking to Chester and Coventry to see the first religious plays in a language understood of the people—singular productions, whether viewed as dramatic, educational, or purely religious institutions.

I cannot pass from the consideration of these old monastic plays without recording two interesting revivals of them in modern times. When the late Cardinal Newman was living quietly at Edgbaston, freed at last from the religious controversies of half a century, he took a keen personal interest in the school for boys attached to the Oratory, not the least congenial of his labours being the supervision of their productions of Terence, the prologues in English verse being furnished by his own graceful and scholarly pen. Some years ago† similar performances were in vogue in the Ospitale di Santo Spirito in Rome, at which much-praised productions of Latin comedy were given by the scholars in the presence of their Cardinal visitor.

We have reached that turning-point in the history of education in England when, in the sixteenth century, the centre of gravity was finally shifted from the monastic houses to the Universities. We find in the *Statutes of S. John's College, Cambridge*, for the year 1545, an order to the effect that the tragedies and comedies acted between Epiphany and Lent should be composed by the lecturers and examiners of the College. In the *Statute Book of Trinity College* (Stat: Coll: SS: Trin: Cantab: Elizabeth: cap: xxiv) is a statute "*De Comœdiis ludisque in Natali Christi exhibendis*," which is almost identical in phraseology with the Westminster ordinance quoted below.

Justly the most famous of English School Plays is that which is annually performed by the Queen's Scholars of S. Peter's College, Westminster. To the outer world, which knows it only through the medium of the press, it has long been regarded as an educational event of interest and importance, and as a pleasing feature in that Public School life which is regarded with a curious interest and pride even by those who have no practical

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\* Much curious information respecting these plays may be found in the *Études religieuses historiques et dramatiques par des Pères de la Compagnie de Jésus*, parts of which are translated by Father Cahour in the *Catholic World* for August 1865, whence these notes are largely taken.

† *Blackwood, ib.*

experience of it. Within the school walls, thanks to the traditional usage which endears it to the conservative instinct of boyhood, it has become the event of the school year; while to the "old Westminsters" who annually throng to see it, it is doubtless dear, not only for the dignity of its historic record of 350 years, but also for all the many memories that gather round school days and ways when once they lie for ever behind us.

To Dean Nowell, master of the School in 1543, "who brought in the Comedies of Terence for the better learning of the pure Roman style," is due the credit of their inception, but it will be seen from the following extract from the charter of the foundation of the College that this laudable effort was first put on a permanent and, so to speak, legal footing when it received the royal sanction at the hands of the princely benefactress of the College, Queen Elizabeth.—

*"De Comædiis et Ludis in Natali Domini exhibendis.*

"Quo juvenus maiore cum fructu tempus Natalis Christi terat et cum actioni tum pronunciationi decenti melius se assuescat, statuimus ut singulis annis intra duodecim post Festum Natalis Christi dies, vel postea arbitrio Decani, Ludimagister et Præceptor simul Latine unam, magister choristarum Anglice alteram Comædiam aut Tragædiam a discipulis et choristis in Aula privatim vel publice agendum curent. Quod si non præstiterint, singuli quorum negligentia omittuntur decem solidis mulentur."

The Westminster *répertoire* now consists of four plays, the *Andria*, *Phormio*, and *Adelphi* of Terence, and the *Trinummus* of Plautus, which are given in regular order, an arrangement which, while offering the necessary variety to the quickly changing race of actors, is calculated to lessen in no small degree the labour and cost of production. The play is now given in the large dormitory, which is fitted up for the occasion as a theatre. It is preceded by a prologue in Latin iambic verse spoken by the captain of the school, and followed by an epilogue, also in Latin, the latter a harmless and humorous Saturnalia in which the topics of the day are duly burlesqued, and which, so long as it is regarded as a *morceau pour rire* and is not allowed to encroach upon or detract from the comedy itself, is fairly outside the domain of criticism. The prologue, on the other hand, is dignified in treatment, and generally includes reference to the fortunes of those families which stand in a peculiarly intimate relation to the school. An alphabetical collection of these prologues, covering the first thirty years of the last century, was made by Robert Prior, a relation of the poet, and published with the title *Lusus Westmonasterienses*. These have been re-arranged in chronological order and largely supplemented by Messrs. James Mure, Henry Bull, and Chas. Broderick Scott, to whose "*Lusus Alteri Westmonasterienses*," published in 1867, most of these notes are due. I was courteously given an opportunity of seeing the last performance, and give the following impressions for what they are worth. As a linguistic exercise I was most favourably impressed with the play; the Latin, the effect of which was marred to a prejudiced ear by the English pronun-



ciation adopted, being delivered with a clearness and intelligence uniformly excellent. The *mise-en-scène* I thought a not wholly successful artistic and archæological effort, but as a social event in the life of the place, calculated to give coherence to the best traditions of public school life by bringing many generations together on the common ground of admiration for a great author, it was above criticism and above praise.

To return from this modern digression. In the days of the Merry Monarch, one L. Cripps issued a little book bearing the imprimatur of the Bishop of London and entitled "*School Play prepared for and performed in a private Grammar School in Middlesex, 1664.*" The play is in English, and takes the form of a grammatical masque, possibly a scholastic reflection of those which found such favour in the French and English Courts of the time. It purports to represent a war between the various parts of speech, and contains a highly fanciful account of the origin of grammatical irregularities. It is not very intelligible and of no educational value, but possibly not without interest as reflecting something of the artificiality and wordiness of the age when it saw the light.

In 1717 Congreve's *Mourning Bride*, and in 1727 *Julius Cæsar*, were produced by the Westminster boys\* at the Haymarket Theatre. Within the school itself they seem always to have been faithful to their Latin tradition.

Terence was played at Hackney School in the middle of the eighteenth century. The English prologue to the *Andria*, when it was there represented in the year 1763, was contributed by Garrick, who gave a further proof of the interest he took in these school productions of Latin Comedy by presenting the scenery used for the performances at Westminster, and also the dresses used for Parr's representations of Sophocles at Stanmore. Possibly through the inspiration of its great patron, Hackney School became famous for its Shakesperian acting later in the century, during the headmastership of Dr. Newcome.

We come now to the honoured name in the story of school dramatics, that of Dr. Valpy, master of the ancient foundation school of Reading at the close of the last century. In addition to his Greek speeches noted below, within twelve years (1790-1802) he produced† four plays of Plautus—chosen, I should imagine, to avoid competition with Westminster—and, besides his abridgment of Shakespeare's historical plays, to which he gave the name of "*The Roses*," six complete plays of the same poet, including *King Lear* and—surely a unique event in the annals of the drama—a performance of *Hamlet* in aid of the Sunday Schools of the town! A distinctive feature of the Reading Plays is that they were without exception performed in the

\* "*Lusus Alteri Westmonasteriensis.*"

† "*Poems, &c., spoken on public occasions at Reading School.*" R. Valpy, 1804. The preface of this work contains an interesting justification of School Plays, on the ground that the author, after a long and varied trial of the system, had found it attended with many beneficial, but not one detrimental consequence, to his scholars.

cause of charity, the representation of the *Rudens* of Plautus in 1794 being for the benefit of those who were left widows and orphans by Lord Howe's victory at sea off Ushant in the same year.

That the foregoing is anything like an exhaustive account of the Latin plays that have been given in English schools I cannot of course claim. It may, however, be sufficient to indicate that there has been a continuous tradition of Latin drama, taught in the first instance by the foster-mother of the Latin tongue, dwarfed and overshadowed by the English mysteries of the later middle ages, but gaining a firm hold at the Reformation, which it has happily maintained till our own time.

I do not think that this continuous tradition can be established in the case of Greek drama. After the first fervour of the revival of Greek learning, neither the general standard of culture, nor the appreciation of the Attic tragedians, nor the discrimination between the best and the worst periods of the intellectual output of Greece, were such as to render it likely or possible. The course of Greek learning was too soon diverted. Greece has been pictured as rising from the dead with the New Testament in her hand. Hard on the Renaissance came the Reformation, and if the Renaissance was Hellenistic, the Reformation was Hebraistic, that is, it was imbued with a spirit the most cogent and absorbent in history. Whence then did this century's discriminating appreciation come? Is it not directly due to the renewal of interest in Hellenic culture that marks the thought of Germany at the close of the last century? This was a movement philosophic rather than literary, spontaneous rather than dependent on the change and chance of history. It was a fine and natural turning of the best to the best. The new-born hope of Germany, chilled by the cold and faithless classicism of the eighteenth century, and frightened by the monstrous shapes that lurk in the tangled growth of romance, found its way by unerring instinct to the best things of the old forgotten culture of Greece, to that abiding place of all that is ordered and harmonious and beautiful, where the sunlight still sleeps upon the broken marbles of the Parthenon even as it did when they were yet untouched by time and undarkened from the West by the coming shadows of the dominance of imperial Rome. Of our later debt to such *savants* as Schliemann and Dörpfeld, and of the bearing of recent archæologic discovery on the production of Greek Tragedy, I have something to say below. For the present I can but recall with reverence the names of the heroic age of the German Renaissance, the names of Lessing, Klopstock, Weiland, Herder, Winckelmann, and of Goethe himself, the names of men who substituted the influence of ancient Greece for that of modern France, and drew the eyes of all men to that which is permanent and universal in literature and in art.

It must not be supposed, however, that the spirit of Gallio lay so strong upon England in the eighteenth century that none were found to care for these things. The following unexpected and charming vignette of education in the last century is from Barker's memoirs of Dr. Parr, published under the title



*Parriana*, in 1828. Parr had been an assistant-master at Harrow School, but in consequence of dissensions had resigned his mastership in 1771, and set up a private school near to Harrow at Stanmore.\*

"He taught the young men committed to his care with his usual earnestness and ability, and it deserves to be remembered that in the presence of Sir William Jones, Mr. Bennet Loughton, and other well-known scholars, they performed the *Ædipus Tyrannus* and *Trachinæ* of Sophocles. The chorus was omitted, but the dialogue was spoken in the most judicious and impressive manner by the different performers. The scenes were furnished by Mr. Foote, the dresses by Mr. Garrick, and some particular robes which the Doctor's erudition pointed out to him as necessary for the representation of a Greek play were prepared under his direction by his own family. His scholars, as he observed, with greater ease conquered the difficulties of which young men complain when their minds are first turned towards the dramatic writings of antiquity. Their attention to Greek phraseology and Greek metre was invigorated, their views of the plans and characters of Greek drama became more correct and enlarged; and their recitation in dialogue was found to be very efficacious in quickening their sensibility, strengthening their memory, and refining their taste."

All honour to the memory of the good old divine and scholar. Not slight were the "sensibility and taste" required for an experiment of such a kind at such a time.

Of a similar kind, though perhaps more pretentious, were the presentations at Reading, under the auspices of the indefatigable Dr. Valpy.

Here will be a convenient place to offer a few remarks on such adaptations of the Attic drama as were made by Dryden in England, Corneille and Voltaire in France, and Goethe in Germany. It might be argued that their great popularity—Voltaire's *Ædipus* was played forty-six times consecutively—is proof in itself of the continuity of Greek dramatic tradition; but, to take the last-named first, the Greeks of the *Iphigenie auf Tauris* are, like the Romans of *Julius Cæsar*, outside the sphere of comparative historical criticism. They are partly Greek and partly German—but all Goethe; and they live in a splendour of verse that is all their own. *Mutatis mutandis*, I suppose the same might be said of the *Atalanta in Calydon*. It is extremely beautiful and extremely Greek, and yet more extremely modern. For their intrinsic loveliness either of these plays might be played in schools—with courage. Of the others it may be said that they are best where least Greek: not in proportion as the textual debt to antiquity is large, as in Dryden's case, but as the author's native genius has free play. For a pregnant discussion of the treatment by these authors of the Labdacid myth, I can only gratefully refer my readers to Professor Jebb's introduction to the *Ædipus Tyrannus* [edition 1893, pp. xxxiii-xlvi.].

\* Cp. *Harrow School*, edited by E. W. Howson and G. T. Warner. (Edw. Arnold, 1898.) pp. 61-62.

If we are to look askance on these adaptations as forming no genuine part of a Greek dramatic tradition, is the practical value of verse translations for the purposes of dramatic rendering to be disregarded? Professor Campbell gives the whole weight of his practical experience and Sophoclean scholarship to the rendering of Greek plays in English, writing\* with much humour and point on the anomalies of modern representations in Greek. With many misgivings as to whether it is as pedant or tyro scholar, I continue to hug the chains of the original tongue, and can but offer this excuse that, while he is thinking of the audience, "quidquid agunt pueri nostri farrago libelli."

It remains to be considered what has been done for the revival of Greek plays in recent times. The representation of the *Antigone* in 1845 at Covent Garden seems to have been a musical rather than a dramatic event, as the interest centred round the choral odes which Mendelssohn composed for it. If this be so, the pioneer of the dramatic revivals was undoubtedly the late Professor Fleming Jenkin, through whose versatility, enterprise, and enthusiasm performances in English were given of the *Frogs*, *Trachiniæ*, *Agamemnon*, *Electra* and *Ajax*. I quote Professor Campbell's statement, being without means of knowing how large a share of their success is due to his own labours in the same field, particularly to his fine renderings of Sophocles in English verse.

But within the last twenty years at least as many revivals of Greek tragedy in their original language have been achieved, and it is with these that we are more immediately concerned. Perhaps the most noteworthy have been the productions of the *Agamemnon* in the hall of Balliol College, Oxford, in 1880, and of the *Ædipus Tyrannus* at Harvard University, U.S.A., in 1881. The Balliol representation was remarkable, not only for the spirited enterprise which prompted this initial effort, but also for the forceful simplicity with which it was carried out, achieving its success by the dignity and earnestness of its acting rather than by elaborate scenic effect.

For the performance of the *Ædipus* at Harvard, on the other hand, seven months were occupied in careful preparation, and all the resources of scholarship, archæology, and art were taxed, to make the representation as far as possible perfect in detail. For its well-merited success in these respects it is sufficiently remarkable, but above and beyond this the performance as a whole furnished a complete answer to a most crucial question—a question involving the permanence of the art of Sophocles. Would not the ethical teaching of the play be overborne for a modern audience by the nameless tortures of *Ædipus* and *Jocasta* when unfolded step by step upon the stage? The question is thus answered by Professor Jebb†:—"Nothing of

\* For an interesting account of the rendering of Greek Tragedy in England and abroad in the language of the country cf. Professor Campbell's "Greek Tragedy," pp. 317-322.

† In his introduction to the *Ædipus Rex*, edition 1893, p. xlix, where he quotes from the "Account of the Harvard Greek Play," by Henry Norman, James R. Osgood & Co., Boston, 1882.



the original was altered or omitted, and at the last *Œdipus* was brought on, his 'pale face marred with bloody stains.' The performances were seen by about six thousand persons—the Harvard theatre holding about a thousand at a time. As an English version was provided for those who needed it, it cannot be said that the language veiled what might else have offended. From first to last these great audiences, thoroughly representative of the most cultivated and critical judgment, were held spell-bound. The ethical situation was so overwhelming that they listened with bated breath. . . . The play is over, there is a moment's silence, and then the theatre rings with applause. It seems inappropriate, however, and ceases almost as suddenly as it had begun. The play has left such a solemn impression that the usual customs seem unfitting, and the audience disperses quietly." This is the nineteenth century's practical interpretation of Aristotle. This is tragedy "effecting by means of terror and pity the purgation of such feelings."

This magnificent effort, apart from the peculiar and abiding significance described, has not been without immediate result in America. I can only note two performances of the *Electra*, one at Smith College, Northampton, in 1889, and one in Iowa; and also the revivals at New Haven in 1891, at Vassar in 1893, and at Toronto in 1894, when the *Antigone* was produced, of which an appreciative criticism appears in the *Spectator* for March 17th of that year.

Despite the spirited beginning which was made at Balliol, the sister University is responsible for the most noteworthy subsequent productions in England. I cannot do more than enumerate the Cambridge plays. They were—the *Ajax* in 1882, of which an interesting critical notice by Professor Percy Gardner appeared in the *Academy*, Vol. XXII., p. 416; the *Birds* in 1883; the *Eumenides* in 1885 (I believe the only modern representation); the *Œdipus Tyrannus* in 1887, a most successful production, of which an worthy souvenir remains in the "*Record of the Œdipus Tyrannus at Cambridge*"; the *Ion* in 1890, the occasion of the appearance of Professor Verrall's singular fantasy; the *Iphigenia in Tauris* in 1894, described in the *Academy* for December 8th of that year; and the *Wasps* in 1897.

The Oxford productions are fewer in number and less in interest. Besides the Balliol *Agamemnon* they include the *Alcestis* in 1887, the *Frogs* in 1892, and the *Knights* in 1897. Ancient Comedy in modern Oxford gives rise to curious reflection. I may instance the *Frogs*. It was certainly a success in its way. It was played behind the footlights of the little rococo theatre, where the stars of the lighter dramatic stage whom the undergraduate world delights to honour achieve their triumphs: it was admittedly burlesqued into a most amusing modern farce, a medley of things old and new, which was reflected with rare skill in the music which accompanied it, where, among much which was thoughtful and original, *leit motive* skilfully adapted from every source (the *répertoire* of the music hall not excluded) caused the most infectious merriment. The undergraduate world came, saw, and was conquered, as who would not be by the way-

ward drolleries of Xanthias and Charon's exposition of the later mysteries of Isis? The superior person sniffed and muttered of travesty and degradation, and yet the production in Oxford surely had one characteristic of the original: it *pleased the people* and by precisely the same means, by parodying the things they cared for most, by offering them a wild, tumultuous rout of things old and new, sacred and profane. In fact, taking the production as a whole, in proportion as the actors departed from the original the audience approximated to it. Here were no rows of spectacled pedants fumbling in the dark with text or translation, but a roaring, delighted mob of the good citizens of the new Athens keeping holiday. Looking backward I think it is chiefly on this unconscious *rapprochement* of the old and new that the O. U. D. S. of 1892 is to be congratulated. §

It is now time to consider what has been done for the revival of Greek drama in schools within recent times.

The first and honourable place must be given to Bradfield College. Limits of space prevent my giving anything like a complete account of the long and successful series (culminating in the complete and dignified presentment of the *Antigone* in this year) that have made the Bradfield stage famous. There are however one or two distinctive features of these productions to which reference should be made.

The first point is the theatre itself. It has been left for the enterprise of an English public school to construct a Greek theatre on Greek lines, and one may safely say that no single step could do more to restore to the drama its original dignity, and to remove it from the jarring associations of the theatre of to-day. The Bradfield theatre, like its Attic prototypes, is in the open air: the auditorium has been skilfully constructed out of a chalk pit; the lines and proportions of this are most graceful, and the stage buildings effective and appropriate. In its great size and quietude, in its marvellous acoustic properties, in its atmosphere of high festival to which it readily lends itself, it is thoroughly Attic. And what purist would disdain the added delights of a glorious English June? the dappled sky overhead, the delicate woodland setting, the scent of new-cut hay, the distant sharpening of the scythe, the thrush's careless rapture, and the ceaseless murmur of the bees?

The next point is the music. In the Bradfield theatre, thanks to the learning, skill, and patience that have been lavished on the presentations, we can listen to the nearest we shall ever get now to the musical utterance of the Greeks. The citharæ are there, the auloi are there, and there too are the strange intervals, rendered with wonderful precision and accuracy, in which we are told the Greek ear took delight. The musical question is one for experts, and it is with the utmost diffidence that I offer the following considerations.

The music can be approximately reproduced, its effect on actors and audience cannot. We cannot at will forget and

§ The *Journal of Education* for September, 1898, contains an account of a successful performance of the *Alceste* in Greek by the students of Trinity College of the University of Melbourne on June 22nd of the present year.



forego the inexhaustible musical heritage with which the past has dowered us since first Antigone stood, the bride of death, at the going in of the tomb. For generations past, from birth to death, certain harmonies, intervals, and cadences have come to stand for certain emotions, and when these fail or others take their place a haunting sense of something wanting inevitably comes upon the mind. Is it not better, then, to allow the ear those arrangements of rhythm and harmony to which time has accustomed us, and to exact from musical accompaniments not realisation but suggestion? Who would deny that the clearness, severity, and inevitableness which one would conceive to have characterized the musical utterance of antiquity are beyond the resources of suggestion with which modern music is so richly endowed? No one who cares for the things of antiquity can fail to be interested in the music as rendered at Bradfield; one is grateful to have heard it; but it does seem disproportionate to sacrifice to archæologic interest so unequalled an opportunity for illuminating profoundly moving drama. The musical accompaniments to a recent revival of the *Medea* at Chigwell indicated how satisfying to the ear and intelligence, and how free from overt anachronism, work of this kind may be made.

Ten years ago Cheltenham College began a dramatic tradition of high promise with a rendering of the *Electra* of Sophocles. This presentation gave a good idea of what can be realised in the way of scenic effect in an ordinary rectangular "big-school," the massive Doric façade of the palace of Atreus, though "practicable," appearing in excellent proportion to the figures. The music was singularly clear and helpful; the delivery of the text, which was very little cut down, was straightforward and free from the padding of over-elaborate business. The chorus, at some sacrifice of illusion, would have gained in refinement by a greater simplicity of make-up.

The performance of the *Œdipus Coloneus* in 1889 was in many respects remarkable. I believe I am right in saying that it is the only representation of the play that has been attempted since classical times, as the performance for which Mendelssohn composed the music was abandoned. The music was used on this occasion with the most happy effect. However frankly it departs from the original in method and feeling, it remains beautiful to the ear and rhythmic to the intelligence; and it went far to ensure the success of the stasima which were the feature of the play. Mimetic dancing has long been considered one of the lost heritages of antiquity, but here at any rate was a genuine attempt to revive it. It may have been rather boisterous for the tenderness of the play, and something of the ceremonial and hieratic side was necessarily sacrificed, but that it was intelligent and intelligible there can be no question. It was a not easily forgotten feature of a remarkable production.

The performance of the *Birds* in 1892 is the first school comedy of which I can find record. Immense pains were taken over it, the music abounded in the happiest effects, and the



dresses of the birds were wonders of ingenuity; but the result, though creditable in every way to those concerned in it, goes far to prove the superiority of tragedy for the purpose. Greek Comedy is admittedly a mine of interest that no study has yet explored to the end; for the proper understanding of the everyday life of Athens its claims are paramount; but, to skim lightly over a deep problem, humour remains more transitory in its application than pathos, and I am convinced that Aristophanes, unless he be burlesqued into a modern farce, has little charm for boys, while its effect on an English audience is simply blank bewilderment. On one other ground it seems to fail for our purpose. How far Greek Comedy is essentially and how far accidentally permeated with the baser elements of Paganism is always a vexed question, but it surely does contain such free, glad, and exulting acceptance of that which after ages have conspired to subject and ignore, that however repaying its historical and textual study may be found, its dramatic rendering is scarcely likely to compete with that of tragedy as a formative influence in education.

I have been obliged to content myself throughout with giving sufficient instance rather than exhaustive account, but reference should be made to a production at Leamington of the *Acharnians* in 1892, which was marked by the curious feature of an original parabasis, and also to a gratifying development of the tradition inaugurated at Edinburgh in the representations at the Academy. Three years ago a creditable performance of the *Antigone* was given, and this year the *Alcestis* was produced with much success on a large and improved stage in the Academy hall.

The *Alcestis*, from the beauty and intelligibility of its stage effects, and the relieving touch of humour supplied by Heracles and the exaggelos, bids fair to be the most successful of these ventures in schools, a popularity to which Browning's lovely setting of the myth in *Balaustion's Adventure* has probably contributed.

Thus much of what has been done for the revival of Greek plays in English schools. The value of the movement now remains to be examined.

Let us consider for a moment wherein the special excellence of Greek drama lies. Greek poetry in general has been finely described\* as being the creation of a people in whom the gifts of the artist were more harmoniously united than in any other race, as bearing the impress of their mind in the perfection of its form, as being also the spontaneous and profoundly suggestive expression of their life. These felicitous dicta are of nothing more true than of Attic drama, the essence of which is the eternal conflict between morality and fatality, which lasts for all time, but is here fought out under unique conditions of clearness and beauty.

Do utterances like these suggest a depressing comparison with the material with which we have to deal? With the memory of four attempts by grammar school boys at the *Edipus Tyrannus*, the *Alcestis*, the *Ion*, and the *Medea* in my

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\* Professor Jebb *Atlantic Monthly*, 1893 (vol. lxxii).

mind, I can for myself answer "No." It must work for good that a handful of boys, who pass their time in limits as drastic as they are intangible, who look forward to a narrowing of their intellectual horizon as their natural lot in life, should take successful part in an undertaking which implies a higher standard of finish in all the arts than they may ever see again. And this possibility of finish seems the prerogative of Attic drama. *Ethically*, its simplicity of motive, its dependence on ἀρχαί, its biblical freedom from cross issues, and *technically*, its unity of dramatic action, its paucity of characters, its freedom from over-elaboration of local colour and detail, combine to give it a clearness, precision, and tangibility that bring it within the compass of the comprehension and expression of boys.

And its connection with the teaching of language—what result, if any, is to be looked for here? The best result is one which boys can never tell you, only show you by a saner and more loving regard for the things of antiquity, the vitality and charm of which they may first and best learn here. The inductive method may be the necessary and right one; properly applied, its claims are paramount; only, as things are, we seem to be for ever raising the dust of grammar, and crying, "Behold the wisdom and the beauty of the ages!" Do we ever realise how far different in such things as language-learning the child outlook is from our own? They have not passed this way heretofore, while we know so well whither it is leading, what vistas to look for, and to us every stone and stock is bright with promise or endeared by reminiscence. So it comes that we hurry forward, calling to them to see this or that while they are toiling behind, shut in by barren foregrounds, and wondering what it is all about.

What developments these productions may have, tending to make the Greek a spoken language in our schools, if not as French and German are to-day, as Latin was in former times, I dare not prophesy: but however tentatively this has been put, is there anyone who teaches Greek but feels a want of this kind, or anyone who has had to do with productions like these whose hopes have not been raised that in this way the want may be supplied?

I place this vitalisation of dry bones as by far the most important of the results to be obtained, but there are other more tangible and easier of demonstration. In the first place, the facility for and knowledge of iambic verse is unquestionably strengthened, though for this end nothing more is claimed for dramatic rendering than the merits of ordinary "repetition" beyond the certainty of the text being rationally understood. With regard to the choral odes and their metres, a correspondent whose opinion is of value both from dramatic experience and scholarly attainment, writes: "I question whether the average schoolboy learns much of choral metre at the time, but he has, if in the chorus, presumably an ear for music, and by associating the words with the melody performs the difficult feat of bearing in his head a chorus which he can produce at will for the dissecting board of his subsequent studies." Another point on which much



may be learned, if the teaching is adequate, is the significance of particles. Most boys evince not a little incredulity when they are taught that other reasons than the exigencies of metre limit their use and position; but if they learn to deliver their lines, especially the stichomythic passages, with something of the proper shade of meaning, not only *καὶ μὲν* and *καὶ γάρ*, but even the hitherto irrepressible *γε*, will learn to mend their manners and know their places. A long *ῥῆσις* is in itself a valuable addition to a boy's vocabulary, and lastly, and less directly, grammar and syntax alike will be supplied with other than the time-honoured instances, and consequently invigorated and improved.

Turning to other points not linguistic but closely connected with the Attic drama, we may consider for a moment the mythologic background into which it is woven. In these days it seems to me no small thing to restore to boyhood something of its lost heritage in classical folk-lore. Owing perhaps to the scientific method adopted in text-books, where history begins with fact and the legends are touched on only to be explained away, it is rare indeed now to find in the middle forms of a school (whence the chorus and "supers" are likely to be recruited) any knowledge of the myths which have been the delight of scholars old and young in past ages, a fact which, if things go on as they are, we shall soon have only the unalterable record of language to prove. The bearing of dramatic renderings of this kind on the history and literature of the age of Pericles is too direct to call for much comment; they seem moreover *per se* the most obvious and natural source of information on a theme of perennial interest, the practical theatric methods of the ancients. With reference to these points I may quote again from the same correspondent. "To take one instance in Classical Moderations at Oxford, I did best in these three papers—Sophocles, the Greek drama, and critical questions. My first knowledge of classical architecture, of dress, of Athenian topography, of the theatrical arrangements themselves, came from the getting up of our plays."

On one special point in classical archaeology I think boys may learn unconsciously by means of these dramatic renderings a mass of facts, of the first interest in history, which were necessarily beyond the ken of scholars before our time. They may learn to see for themselves the close connection between the geometric phase of Greek art and the so-called legendary period which formed the background of the Attic drama. The discoveries of Schliemann and his followers have revealed, not merely traces, but adequate and delightful remains of a prehistoric culture in South-Eastern Europe, singularly different from the later period of imaginative and didactic art which culminated in the age of Pheidias.

The close connection between this bygone, long-forgotten life and the Homeric society is now definitely established. *Pro hac vice* we may waive all the natural discrepancies between epic and dramatic mythology, and clothe and decorate our plays, not after the conventional and hybrid classicism of the later Renaissance,



not after the scholarly and elaborate Hellenism with which Mr. Alma Tadema has made us familiar, but in the manner and fashion of the prehistoric inhabitants of Tiryns, Mycenæ, and Hissarlik, and thus achieve at least an approximation to the outward life of Electra, Medea, and Alcestis as they went their ways on earth in those long-forgotten days of once upon a time.

Two other courses would seem to be open to us. We might seek to go behind the mind of the dramatists and reproduce the heroes as they might have appeared to them through their very imperfect perspective of history, or we might rely boldly on archæologic interest and set before the audience a staggering, disproportioned figure with trumpet tones and passionless features as the nearest we can get now to the actors of antiquity. Perhaps these two courses are more closely allied than one would think, and attempts in these directions would probably win the approval of high authority; yet it might be worth while to make the attempt to apply the same historical knowledge to Greek drama that has done so much for Shakesperian revival. It is an attempt which lies within our compass, is artistically satisfying in result, and is justifiable on one theory of the connection between history and drama.

It is possible also to convey not a little knowledge on these details by what I may call the *lucus a non lucendo* principle of representation. All the unavoidable divergencies from the original may be carefully explained to the actors in course of rehearsal, to the community in form of a lecture, and to the audience by carefully chosen extracts in their programmes; while a model of the Attic theatre, which can generally be supplied by the artistic ingenuity of the school, will prove a natural source of interest in construction and of information when completed.

I append as of possible interest a short general paper which was set to the cast of a recent revival of the *Ion*. There are no linguistic questions, as the boys had just offered the play for their midsummer examination. The answers were intelligent throughout and fairly accurate, though frankly of a kind that made me feel how much more result could have been obtained had less been taken for granted. A gratifying feature was the enthusiasm with which the last question was answered in the affirmative.

1. What character did you play? Write down three merits and three defects of the character.

2. Why was Euripides thought more within our compass than Æschylus or Sophocles?

3. Write down some of the most striking differences between the original presentation of the *Ion* and our own.

4. Write down with careful accentuation and punctuation the last five lines of your part, appending a literal and a verse rendering, and supplying adequate notes on delivery and stage directions.

5. (a) Describe your dress in detail, giving Greek names.
- (b) The scheme of colour contained no dead white or black, and one colour was absent. What was that?
- (c) What in plain language is a motif in music? Describe the principle on which the music for the *Ion* was composed.
6. (a) How and why did the dresses worn differ from those painted by Tadema, Leighton, and Poynter?
- (b) What were our models for ornaments and details of decoration?
- (c) Write down the inscription on the altar.
- (d) What was the statue? Where is the original? What was the meaning of the outstretched arm?
7. Bearing in mind such considerations as
  - (1) Your school work,
  - (2) Your duties as præfect,
  - (3) Your iambic verses,
  - (4) Your knowledge of Greek drama,
  - (5) The labour, and
  - (6) The pleasure of production,

and any others that may occur to you,—do you think the production worth it?

The last questions suggest some practical issues on which I offer the following considerations.

*Expense.* This will vary so much, according to the ideas of what is necessary and the practical capacity of those who are concerned in the production, that I find figures are only misleading. I can only note that the principle of approximative simplicity discussed below is also that of actual economy, that the initial expense of an undertaking of this kind will go far to cover that of perpetuating it, and that the numerous art fabrics now so cheaply produced are a real boon to the choragus whose theoric fund is limited.

*Time and Trouble.* Except for the learning of the text, which will presumably form part of the school repetition, and possibly the use on the part of a few of the weekly drawing hour for the execution of designs, I make no question that the mass of the work should be done out of school throughout the term, especially where the representation is in the winter, when the rehearsals will be found a real boon during the long evenings or on wet half holidays. As the day for the production approaches it may well be that a half holiday or two and an occasional evening may be required, but if only the rehearsing is set quietly going sufficiently early in the term, and too much is not attempted, this should be found sufficient.

Still, Greek plays do not create themselves, and it will be necessary to find a stage manager. His office will be no sinecure. The teaching of the text and music, and the actual execution of



the innumerable details of the stage, he will be able to depute where he can find (as in what school can he not?) able and willing coadjutors. For all else he must rely on the intelligence of his cast and his own efforts. Any shortcomings and limitations on his part will be more than compensated by the unity of effect that can only come from the whole performance being focussed through one mind. Delegation here means patchwork, want of confidence on the part of his cast, want of harmony in the detail, and want of proportion in the building up of the play.

*Realisation.* I used above the word "approximation," and here will be a convenient opportunity to indicate what may be done in this direction. It is obvious that herein lies the only solution of the difficulty, as complete realisation of the past under the most favourable circumstances and with the most lavish expenditure can never be really achieved, some of the conditions of the original (*e.g.* the religious motive) being in their nature incapable of reproduction. The whole matter therefore becomes a question of degree, and on this every one will be likely to have his own instinctive feeling, but I often think that much labour and cost are often expended on details which cannot compare with the most indifferent productions of the modern professional stage, and that as some of the most vital conditions cannot be reproduced, the less vital, where they are costly and ineffective, might well be let go. In short, the particular approximation I advocate is the rendering of detail or essential by means not in themselves historically justifiable, but yet by their very transparency and naturalness reminiscent of, rather than discordant with, the original.

For example, the use of sandals will be found an expensive and troublesome item, while the natural foot will always have a simple, natural, and on the principle indicated above, an approximately "correct" effect. In a similar way, where the representation is on simple lines, some of the chorus may be allowed to sit on or about the edge of the platform which does duty for orchestra. Space is economised, the hard edge of the stage picture is broken with good effect, and the arrangement, though seemingly insignificant, is in effect curiously reminiscent of the primitive wandering stage with which the birth of Greek drama is dimly associated. Again, the whole of the difficulties of lighting and make-up can be got rid of if only courage is taken to give the performance in the daytime. Where much scenic effect is contemplated this is perhaps impossible, but for simpler efforts the soft diffused light of an English summer afternoon will, if adequate pains have been taken with dressing, grouping, and posing, bring to the whole production a delicacy and refinement which the glare of footlights with all their merit of concentration and piquancy can never rival.

*A School Event.* Of its general effect on a school term I have nothing but good to report. It employs the talents of all the community, and it employs the tongues of the untalented. It forms a new and rational interest very welcome to minds perhaps only unconsciously weary of the alternative charms of third-hand athletic "shop" and the perusal of trivial periodical literature.



*The Cast.* The peculiar construction of a Greek drama simplifies in a marked degree the process of rehearsal. Any room will hold three boys and their "coach," all that are required for an epeisodion in its initial state, and these may be got together without either the dislocation of arrangements or the undesirable loading attendant upon the production of an English play with its cumbersome crowd of small parts. The chorus rehearsals, as far as the stasima are concerned, can be kept quite distinct from those of the actors proper; an arrangement which, if illogical in theory, is excellent in practice, as the process of welding the two together, at a time when interest might be expected to flag, gives a new lease of life to the whole undertaking.

It is obviously desirable to make as large a demand as possible on the interest and intelligence of the actors. The ideal cast would be one which left to their "coach" only the duty of choosing between their various suggestions and reducing them to their proper harmony and proportion. It is, however, a far cry from English school-boy life to the art of Sophocles, and this would be rather much to expect; yet with practice and encouragement boys will go some way towards it.

As explicative of my meaning, and as of possible interest, I append part of a notice issued to the cast of the revival of the *Ion* noted above:—

"(1) Re-read the whole of the lines allotted you at a sitting, and make up your mind what kind of character yours is meant to be:—(a) in general, as whether old or young, brave or cowardly, simple or complex; (b) in relation to the plot, as whether well-disposed to the hero or the reverse.

"(2) Begin at once to study the text. Every clause has two meanings:—(a) a grammatical meaning, dependent on dictionary and grammar; (b) what may be called a psychological meaning, depending on the mind of the speaker at the precise moment in the play when it is uttered. Thus the words *παύσαι πλέκουσα* doubtless mean 'cease thy plotting,' but you must choose for yourself whether they are an indignant flash of scorn at what is past, or a solemn and, as it were, judicial introduction to what is to come.

"(3) English verse depends on *accent*, and can never be cut up into odd lengths and delivered like prose.

"Greek verse depends on *quantity*, and it is almost impossible to obscure its cadence. Hence the more you vary it in pace and pitch the better."

The arrangements for the chorus depend so largely on the musical method adopted that I can only give two practical observations, which I think would be applicable to any combination of music and movement:—

(1) Let the concerted movements be learned to the accompaniment of the words spoken at a pace approximately the same as that of their musical recitation. This effects a double saving—in the voices of the boys and the time of the *chef d'orchestre*.

(2) As soon as the stasimon is worked into satisfactory shape, issue a simple diagram of its evolutions, such as the boys may copy into their part-books. This gives a standard of reference, begets confidence, and prevents mistakes.

As regards the *scenic arrangements*: where a complete representation is contemplated we are met by the difficulty of determining the proportions of the logeion and orchestra and the

limits of their use. *Pace* Dörpfeld, who would abolish the logeion altogether, a possible solution of the discrepancies between existing data is that the theatres varied in their proportions, if not in their arrangements, much as modern stages do. Such a view would justify the construction of a stage best suited in its divisions and proportions to the play contemplated.

For a single opeisodion an absolutely plain curtain, not draped but hanging in full vertical folds, with a conventional frieze-like pattern painted across it—say a quarter of the way from the top—forms a background effective, approximately appropriate, and easily achieved.

As regards *dress*, I give up as hopeless any attempt to reproduce the traditional appearance of the actors of antiquity. I have given above my reasons for advocating the simplest form of the Doric dress, and for adopting forms of ornament from the prehistoric remains pictured in the works of Dr. Schliemann.

Professor Fleming Jenkin\* has a clear account of the practical side of the matter, which ladies helping in these revivals will find invaluable. I think myself that a firmly made garment, like a waistcoat, cut low before and behind, makes the best foundation from which to drape the folds of the chiton; and that the diploidion should not be a separate garment, but simply the top of the chiton pulled over, fastened with peronæ on the shoulders, and allowed to hang free.

One word on, or for, the *audience*. Let them in mercy have their programmes, translations, or analytic notes with their tickets by post beforehand. The whole subject and method of the play are probably entirely unfamiliar, and their attention during the representation should be concentrated on the stage, especially as there are no "waits" in which they may consult their books or their friends. If they have read a translation recently, and are further well up in the plot as it appears on the stage, I am convinced that during the representation they will do best to trust to their own intelligence and that of the actors.

I have written *currente calamo* of the vitalisation of language, the direct improvement in scholarship, and the indirect gain in the spheres of history, mythology, archaeology, and art, which may be looked for from dramatic renderings like these. Something has been said also of the unique opportunities they afford for quickening the perceptive and expressive faculties of boyhood, and of the rational and healthy interest they introduce into school life.

I believe they may do one thing more. Directly by the methods enumerated, indirectly by the interest they excite outside the school walls, I believe they may become a genuine outwork against the tide which would sweep away the Greek language from our educational curricula.

I conclude with an extract from the author on whom I have trespassed over-much already.

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\* "Papers and Memoir of Fleming Jenkin." R. L. Stevenson.

"Humanity cannot afford to lose out of its inheritance any part of the best work which has been done for it in the past. All that is most instructive in Greek achievement is our permanent possession, to be enjoyed without detriment to those other studies which modern life demands. No lapse of time can make it obsolete, and no multiplication of interests can make it superfluous."\*

JOHN ff. BAKER-PENOYRE.

*Archbishop Harsnet's School, Chigwell.*  
*August, 1898.*

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\* Professor Jebb, *Atlantic Monthly*, 1893 (vol. lxxii.).



ON THE STUDY OF EDUCATION.

## SYNOPSIS

- |                                     |   |                                       |              |
|-------------------------------------|---|---------------------------------------|--------------|
| 1. Introduction : Plan of the Essay | { | Objections to the study               | Section I.   |
|                                     |   | Scope.                                | Section II.  |
|                                     |   | Hints for conducting it with success. | Section III. |

## SECTION I.—OBJECTIONS TO THE STUDY OF EDUCATION.

2. *Objections* :-- That Teaching is not a separate profession.
  3. " That the teacher's power is gained by intuition, not by study.
  4. " The study is not found to be of practical value by practical men.
  - The theory of Education, as expounded in text-books, is useless.
  5. " Students who have been trained are not found to be more efficient than others.
  - a. Some are 'mechanical' in method and spirit.
  6. " b. Others, on the other hand, are impractical dreamers fed upon theory.
  7. " c. Another type is the teacher trained to trust in apparatus and 'methods,' without success in dealing with children.
- (All these objections suggest hints for the better pursuit of Education in institutions for Training.)

## SECTION II.—SCOPE OF THE SCIENCE OF EDUCATION.

8. Educational Science is *not* a sort of "Applied Psychology," but stands on a footing of its own.
9. It may be distributed into three main fields of inquiry :—
  - i. The Aim of Education.
  - ii. The Administration of Education.
  - iii. The Practice of Education—analysis of topics.
12. The science must be subjected to systematic treatment—but there are dangers attending the construction of 'systems' of Education. Every teacher trained to orderly thinking creates his own system.
13. The study of the History of Education.

### SECTION III.—HINTS FOR CONDUCTING IT WITH SUCCESS.

14. The study of Education can only be wisely established as a *post-graduate course*.  
The distinction between Primary and Secondary Training.
15. The teacher's art is learnt by example as much as by precept.
16. The necessity for Schools of Demonstration and Practice.
17. The part played by criticism lessons and discussion :—Contrast between the Jena Seminar and the traditional English plan.
18. The School of Demonstration and Practice as an aid to research.
19. Education in its Ethical and Political aspects needs also to be studied :—  
but on a different method.
20. The variety of interests involved in the thorough pursuit of Education :—  
These enhance the difficulty of equipment for the profession, but also add to its importance as a factor in national progress.

## Appendix I. : A Brief Bibliography.

Appendix II: On the Study of Education in the proposed new University of London.

### On the Study of Education.

1. The question of Professional Training is one of those delightful topics of controversy in which reason and logic are almost wholly engaged on the one side in opposition to sympathy and tradition. As a matter of argument, it cannot be disputed that Education is a subject worthy of serious study, and that men and women who propose to adopt it as their profession should pass through some kind of novitiate before being entrusted with a responsible office. The care of children is a task involving grave obligations to society; teachers are an intelligent section of the community: it might be expected that they would of themselves seek to secure some period for reflection and observation before embarking upon their career. Such pleas have been advanced times without number during the last fifty years, or rather, let us say, during the last three hundred years, for every educational reformer, from the days of Mulcaster onwards, has seen the necessity of commencing his reforms by creating a new race of teachers.

But, in spite of the force of these arguments, the thing has not been done. The immense majority of teachers\* in this country have resisted any proposal for devoting time and money to the study of Education. Now such a resistance must have some kind of defence in the nature of things; it is unreasonable to put down this hostility to Training merely to obstinacy, to the spirit of reaction. No doubt in many instances the opposition has arisen from the same sources that stand in the way of all proposals for reform, but this is not the whole account of the matter. I propose to inquire into the nature of the objections that have been, and still are, offered to the study of Education, for by investigating and endeavouring to meet these objections we shall be approaching our inquiry with a mind open to criticism, and we shall also find valuable hints for the latter portion of this paper, which will be devoted to a sketch of what is embraced in the study of Education, and of methods whereby this study may be pursued as a department of a University, side by side with other professional Schools or Faculties.

2. The first, and historically the oldest, objection may be formulated in a sentence: *Teaching, it is said, is not a separate profession.* This is the standpoint which has been taken time out of mind at the Universities, and it found full expression at the Cambridge Conference in 1896.† A University man who has received a liberal education is regarded as *ipso facto* qualified to enter upon various careers in life, and, among these, teaching, whether at the University or in a school, has always been included. The strength of this argument is undoubted; it relies upon the prestige of scholarship and culture. It pleads that the first

\* Primary Teachers, of course, acknowledge the advantages of the Government Training College, and seek to extend them. But the study of Education plays only a small part in the programme of these institutions (see below p. 347).

† Report of a Conference on Secondary Education. (Cambridge University Press, 1896.) Speeches by the Bishop of Stepney, pp. 95, 96, and the Rev. Dr. Fowler, President of Corpus Christi College, Oxford, pp. 98, 99.



essential qualification for the higher grades of the Civil Service, for Law, for Politics, for Literature, for the Church, and for Teaching, is that the candidate shall be "a scholar and a gentleman." Once give him this equipment and he is competent to take his place in any of these walks of life. The argument goes further and declares that this demand for a sound liberal education is imperilled by proposals to divert the attention of young men to professional studies which lie outside the ordinary University curriculum.\*

Our appreciation of the value of this plea is aided by observing that it has been raised in turn against training for other professions. The point of view of Oxford and Cambridge is still rooted, in some measure, in the Renaissance tradition, which recognised only one profession and only one mode of preparation; and in resisting this tradition all the professions in turn have fought, or are now fighting, their battle. No physician, or barrister or journalist, no thoughtful clergyman, will now assert that he is qualified to pursue his calling at the close of four years spent in the pastimes and studies of his University; and the course of events which have imposed some additional training for such careers will inevitably compel the teacher to seek registration and training. We have here simply another illustration of the phenomena created in modern times by the division of employment, which has affected not only the "professional" classes, but tradesmen and workmen of every type. The same Parliament which has discussed the Registration of Teachers has also dealt with the Registration of Plumbers. We can therefore only meet this objection by pointing out that it is vain to resist the tide of events.

Twenty years ago the Universities may have been justified in opposing the study of Education because there was little sign that the general body of teachers were prepared for it; Teaching, in fact, was not recognised as a profession. To-day the situation is wholly different; the most important group of secondary teachers are now united as a professional body, and are only waiting for public recognition by Parliament. The Cambridge Conference, attended as it was by the representatives of the profession, was a clear indication of the situation, and, accordingly, it was a matter of course that the Conference approved of resolutions for Teachers' Training.

The policy, then, for those who are attached to our ancient University ideals is very clear. If they fear that these proposals for the study of Education will tend to drive young men away from the Universities and to lower the standard of culture, would it not be wise to welcome this new pursuit within their walls? By so doing they will secure two important ends; firstly, they will be able to insist upon an adequate liberal education for intending teachers as a preliminary to professional training; secondly, they can use their influence to ensure that this novel study is pursued in a scholarly spirit, conformable to University standards.

The introduction of new studies, accompanying the creation of

\* Cambridge Conference, Rev. Dr. Fowler, p. 112.



a new profession, is a phenomenon which the Universities cannot control; but they have the power to *organise the pursuit of these studies*, so that these studies themselves shall aid the ends of liberal culture. It has been found that the study of Medicine and the study of Law, when undertaken in a "liberal" spirit, may contribute not only to professional advantage but to the highest ends of culture; some hold the same to be true even of the study of Commerce: now the same is certainly true of the study of Education.

The moral to be drawn from this objection by those who advocate Teachers' Training is equally clear:—our schemes for professional training must be planned not as a substitute for, but as a supplement to, that general training in liberal studies which is needful for all the professions, and for teachers above all.\*

3. Another objection may be expressed as follows:—

*The teacher's power, it is said, is acquired by intuition and sympathy, not by study and observation.* This is, perhaps, a more reasonable form of the old saw that teachers, like poets, are born and not made.

Here we have the standpoint of the schoolmaster of experience, who "knows boys" and who distrusts new-fangled theories. It lies at the root of most of the silent distrust of Training which prevails still amongst secondary teachers, and its origin may be traced to two very different sources.

First, we teachers inevitably tend by the conditions of our life to become strongly set in our opinions. We live out of the world, in a microcosm of our own, in which we are subject but little to control or criticism. Our "results," in spite of inspectors and examiners, can never be adequately tested, and it is therefore fatally easy for us, at an early period in our career, to form a high opinion of our own performances and our professional capacity. Flattered by our success, real or apparent, we are inclined to attribute the achievement to native qualities, such as cannot be aided by that mechanism of training which in other professions contributes to efficiency. To the dictum "Teachers are born and not made," we add as a corollary, "And I am a born teacher."

Again, there is the element of truth in this conviction, arising out of the circumstance that the teacher's business is of a personal nature, and his success depends partly upon "tact," upon undefinable qualities of character which cannot be imparted. Teachers of experience have found that they cannot get much help from text-books or from intercourse with other teachers in dealing with their pupils; they therefore infer that the attainment of professional qualifications must be left to chance.

We must admit the validity of this plea so far as it goes. Just as there are some men who seem "born" to make a correct diagnosis, or "born" to offer a sound legal opinion, so there are

\* Compare Resolutions Nos. 1 to 3 in Report of Training of Teachers Joint Committee (Offices of the I.A.H.M., 37 Norfolk Street, Strand, December, 1897); as I had some share in framing these Resolutions and am in cordial agreement with them, it seems to me not out of place to refer to them here; this essay may indeed be regarded as an unofficial and unauthorized commentary upon the text which the Report provides.

a few men, and far more women, who have an intuitive sympathy with young people; and there are others who have a gift of exposition, which enables them to teach (or rather to lecture!) with success.

But there is little evidence that this "gift" is very common. On the contrary it would appear that the comparative uselessness of a young teacher is due more than anything else to the lack of these gifts of intuition: he is absorbed in himself and finds it difficult to see things from the standpoint of his pupils.

We state this confidently, in spite of a contrary impression which prevails here and there. It is supposed that the teacher fresh from Girton or Trinity, who was in the Sixth Form of a good school only four years ago, will still retain so vivid and happy a recollection of school life as to be able to return to the same field of toil and pleasure in fullest sympathy with its life and environment. Now this may be partly true with reference to instruction in a Sixth Form. A young graduate or a "Blue" will find himself fairly at home with the big fellows of his old school or of any similar school, but it by no means follows that he will be equally at home with the youngsters in the lower Forms. And, after all, this identification of the man with the boy is not a wholly desirable phenomenon: we should not engage overgrown boys in the service of our schools. If the years of University life have not done something to raise the intellectual and moral outlook on to a higher plane, they have failed in their object; they have certainly failed to equip the intending teacher for his career. We may fully acknowledge the advantage to the teacher of having lived his boyhood in the society of a good school, but the impressions gained thereby should hereafter be apprehended in the light of new thoughts and new ambitions, wholly foreign to the boyish circle of ideas. He needs, in fact, to observe, to reflect, to compare; his sympathies and intuitions may be right enough so far as they go, but he will soon be led astray unless these are aided by the deeper insight which comes from a training in observation and reflection.

As things go, most teachers are left to acquire these habits as best they can; but when we are once shut within the four walls of the school, in the society of boys or of our colleagues from morning till night, we have little opportunity for thinking at leisure upon the problems of Education, or for taking that wide survey of the schoolmaster's horizon, so as to get rid of our besetting sin of infallibility.

Now, if professional training is to develop and enlarge the sympathies of the young teacher, it is obvious that it must put him precisely into a situation where he can associate day by day with pupils without being overwhelmed either by the number of them or by the claims they make upon him. He must avoid two opposite dangers: if he pursues his studies of Education merely from books and lectures, apart from children, he is likely not only to learn much that is useless or erroneous but to lose his sympathy with the young; if, on the other hand,



he is left to his own resources, without guidance in formal study and observation, he may never advance at all.

The conclusion we draw is that some training is necessary to widen the mind and to deepen the insight, even in the case of teachers gifted largely with sympathetic instincts; but this training is only helpful if it is conducted in close association with the life of children.\* This association must be intimate and continuous; casual lessons to strange children, odd visits to educational institutions, are of little advantage.

It is worth observing that some of the most distinguished educational reformers owed much to opportunities of this description. Arnold when at Rugby displayed a wonderful understanding of the nature of Sixth Form boys; it is sometimes forgotten that he had gained this experience by his life at Laleham with a few boys at a time. Herbart had a similar experience as a tutor in the Steiger family; Froebel had charge of some of his nephews in the early part of his career; Locke's philosophy of education was the outcome of his observations on one or two pupils.

4. *Objection to Theories of Education as being practically of no value.* Those who lay the greatest stress upon the importance of those natural endowments discussed above will scarcely allege that they cover the whole range of the teacher's activity. In our calling, as in every other, much of the work is the result of purely intellectual processes. In preparing notes for lessons, or in arranging time-tables, we are engaged upon business which is far removed from the personal equation. These occupations are obviously matters of professional practice which depend upon principles, upon doctrines and views which every teacher has to attain, and it seems reasonable that the intending teacher should be aided in laying the foundation for these principles by the formal study of education.

This plea is also met by adverse criticism. *Many teachers of experience will agree that, in the abstract, one ought to devote time to such studies, but they deny that, as a matter of fact, there is anything worth studying.* They mention a few well-known names of writers on education. They have read these books and have found no benefit from doing so. Why, then, should young teachers be required to waste time over these or similar productions?

There can be no question that this objection to the study of Education is sustained by many able teachers, and is sincerely advanced by them. They observe that the examining bodies which offer training-certificates prescribe to students the books to which we have referred, and they may be excused for supposing that this literature stands for the study of Education. But it will readily be seen that their argument does not stand on all fours.

It only proves, what every training-college ought readily to admit, that the science of Education is in its infancy, that a great deal of false doctrine is abroad, opposed to the daily experience of practitioners, and that unless more attention is paid to these

\* Compare Resolutions 3 (ii) 6 (ii) 8 (iv).



studies error will continue to abound. Two hundred years ago Medicine was precisely in the same situation that Education exhibits to-day. Many generations of study in Physiology and Medicine were needed before scientific habits of mind were firmly established as the guide in medical practice. Innumerable follies clouded the brains of reckless and ambitious physicians; but no one will now assert that the young doctor ought to be excluded from the lecture-room because he runs the risk of hearing some nonsense.

To-day we are in a similar position with reference to Education; anyone who ventures to open his mouth, either in a Training College or in a Teachers' Society, to discuss principles and methods may well speak in fear and trembling. The most opposite opinions are maintained on every branch of school practice, and these opinions are concerned not only with trivial matters of school management, but they reach down to the fundamental doctrines of mind and morals which, consciously or unconsciously, mould the thought of every teacher. Now, while this situation should warn us against the assumption of dogmatism, it cannot surely justify us in closing the door to study and research. If controversy abounds, all the more reason for encouraging the coming race of teachers to investigate the principles of their art themselves, so that some approach to agreement may presently be attained. If you cannot rest content with the expositions of Bain and Herbert Spencer, it may be worth while for you to systematise and exhibit your own experience and your own philosophy. If the speculations of these thinkers serve no better purpose, they at any rate act as a whetstone to other minds! It is alleged that most of the current text-books of Education have been produced by men who have never practised the business, or who failed at it; if this be so, it is high time that those who have the right to pass such a judgment should expound their own doctrine, out of the fulness of a ripe experience.\* The field is certainly open.

But those who feel this dissatisfaction with the literature of Education are often influenced by another motive. They expect more than the books profess to give. They think that the writer on theory should be ready with positive guidance on the details of school methods: a direct psychological proof of the value, let us say, of Latin grammar should be produced, or a complete list of studies appropriate to the Third Form. Unless such conclusions are offered the "practical" teacher finds the exposition of theory vague and pointless; he does not see how it

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\* In this connection should be read the evidence of the late Head Master of Rugby (Dr. Percival) before the Select Committee of the House of Commons (Teachers Organisation and Registration Bill, Eyre, Spottiswoode & Co., 1891). He referred to distinguished teachers at Rugby (such as the late Professor Bonamy Price, and the present Dean of Westminster) whose methods and principles had been lost to the profession because there was no machinery (such as institutions for the study of Education supply) by which these may become "public property." These men would probably "have gathered round them a school of teachers." This is the only way in which theory can be safely promoted:—the approved practice of a worker becomes generalised into doctrine, displayed in its relation to fundamental principles.

applies to his daily work. Doubtless the complaint has some justification; we certainly need some evidence from those who write the books that their views really do find application in school life. But, on the other hand, it may be fairly pleaded that the general conceptions of science, in ours as in other professions, are not in a condition to be transferred straight away to the class-room. The object of training is not to supply the student with a ready-made "system" of precepts and rules, but, far more, *to cultivate a habit of mind*. The study of physiology by medical students offers a close parallel. In spite of the wonderful discoveries in this science during the last half century the medical man cannot profess to base his daily practice on these discoveries; in his bedside practice he trusts, now as before, to experience:—his own experience, immensely enlarged by that of others. He differs from the empiric simply by the fact that his professional training has endowed him *with habits of observation and of reflection in the sphere of his art*; and these, if they thoroughly control his mind, constitute him a scientific man. So it is with psychology and ethics in the sphere of teachers' training; if these are studied and not merely crammed they produce new habits of mind. Now these habits will control such a teacher's practice at every turn, although he may sometimes be unable to trace the connection between his science and his art.

Further, when every allowance is made for the primitive and confused conditions of educational theory at the present day, truth should compel us to admit that progress is being made, and that contributions of importance are forthcoming.\* To the present writer the "System der Pädagogik," put forth by the Herbartian School in Germany, has been the most helpful evidence of the practical use that can be made of psychology; and while the tendency in this School to push their application to an extreme may be deprecated, few German teachers will deny that their work is worthy of the name of Science. The theory of the Formal Steps † ("Theorie der Formalen Stufen") in the preparation of lessons may be cited as an example of the direct application of the psychology of the concept to the details of school instruction.

This analogy of the business of the teacher and of that of other professional men must be pressed home. We are slow to realise that the influences of scientific studies and scientific habits of thought are revolutionising men's practice in all kinds of pursuits, and are touching national and social life at every point. To an earlier generation it would have appeared absurd to seek professional advice as to what to eat, or how to erect a dwelling; the man in the street could regulate his hygiene and his diet as he pleased: he only required advice and prescription when disease attacked him. Hence medical science gained

\* See essay on "Psychology and Pedagogy" in Professor Miall's "Thirty Years of Teaching" (Macmillan, 1897).

† In Lange's "Apperception" (Isbister & Co., 1895) we have the best exposition of this doctrine in an English dress.



prestige first of all by the treatment of disease ; to-day we are prepared to trust the physician further, and to accept his advice about the care of health. Now the treatment of mind is a much more complex problem than that of the body. It is still regarded by many as a secret which only religion can rightly touch ; for just as in mediæval times the work of the physician was identified with that of the priest, so in later days it has been difficult to distinguish the function of the clergyman from that of the teacher. But in spite of the complexity of the problem, the value of scientific method is beginning even here to be acknowledged. The modern treatment of the abnormal, whether insane or criminal, is a tribute partly to the development of humane sentiment in our race, but partly to the employment of psychological methods in diagnosis. And just as the physician by the study of physical disease has gained experience and knowledge to aid him in Hygiene, so we may anticipate that the study of the mental diseases by physicians and teachers will throw light in due course on the science of Education.\* We teachers need not fear the spread of the scientific spirit in our profession. Science aims at truth, and truth enters the mind, here as everywhere, not only by intuition, but the slower, surer road of observation and experiment. Some dread the calm, cold-blooded attitude of the man of science, who, because he is watching for a result, appears to care for nothing for the subject of his operations ; they protest that children are not fit subjects for this treatment. But in our age this protest is surely needless ; if men are now more ready than in old days to abandon tradition, and at all hazards to seek the truth, they are not less human than before ; nay, in respect of children we are far more human. The sentiment of this century, which has given a new interpretation to the rights of women, has found a new interest and acknowledged a new claim in the rights of the child. The demand for improved education is due, at any rate in part, to a higher moral sentiment in relation to our children ; and this sentiment may be trusted to check the ambition of those few scientists who will not learn that Truth and Reverence dwell together.

Some conclusions may be readily drawn from our discussion of this criticism. It is clear that the science of education has not yet reached a stage similar to that of many of the positive sciences in which it can be expounded by all lecturers on a common basis of doctrine. Hence the utmost range of freedom and variety should be encouraged in Training Colleges, and no hampering restraint of syllabus, or examination paper issued by central examining body, should prevent lecturers from endeavour after independent thought.† Evidence is accumulating from various quarters as to the dangers to progress which beset our examination system, based as it is upon the imposition of strict uniformity in preparation for the universal test ; this danger should surely be avoided in the study of a science which is not

\* See Titchener : *outlines of Psychology*, Chapter I. (Macmillan and Co), and Ziehen : *Physiological Psychology* (Swan, Sonnenschein, 1894).

† Resolution as above, No. 8 (ii) and (iii).



yet formulated either in matter or method. And it is especially unfortunate that this anti-educational system should be imposed upon a body of students whose very business it is to follow sound example in educational practice. This system of test and examination dates from a time, not so very remote, when scientific method was scouted both by the universities and the schools; and the same forces which are now improving the teaching of science in our secondary schools, are also seeking to reform the methods on which the results of this teaching are tested.\*

Again, it will be readily admitted—most of all by the critics of our current educational literature—that Education is a suitable object for the “endowment of research.” The teacher engaged in a busy practice cannot be required to do much for the advancement of science. One of our distinguished English psychologists recently observed, in a letter to the present writer, that the production of a better exposition of Education must wait until a few teachers of ability and experience, who had had the opportunity of a thorough training in psychology and philosophy, were given the opportunity of undertaking the task. Such teachers are sorely needed in the interests also of our Training Colleges, for these cannot be entrusted with the freedom which is so desirable, unless the reputation of the staff as students of Education is sufficient to give public confidence.

It is the necessity for this double qualification which makes it so difficult to propose the immediate establishment of many institutions for training, and those who are engaged in the few institutions which exist are, as a rule, willing enough to acknowledge the difficulty. A University lecturer whose main interest lies in philosophy may certainly give some aid in the speculative treatment of educational science, and the teaching profession, both in Germany and England, owe a great debt to the celebrated philosophers who have given some attention to our problems; but we cannot ignore the fact that a wide-spread distrust of their methods has been felt by the profession at large. In Prussia, indeed, this distrust has had the unfortunate result† of withdrawing the institutions for professional training from the circle of University faculties. Hence, in view of the obligations presently to be imposed upon teachers by registration, it seems very necessary to find pecuniary aid to enable young teachers to study education, and the sciences allied thereto for a prolonged period.‡ Equipped with such lecturers our Training Colleges may be expected, in course of time, not only to improve the qualities of the rising generation of teachers, but to produce results in research which will directly influence the practice of our schools, similar to those which the medical profession secures from its schools of medicine.

5. Finally, we may consider another sort of criticism, proceeding from those who have observed the methods of teachers who

\* Compare the Annual Report of the Incorporated Association of Head Masters, 1895-6: “Committee on Science Teaching.”

† See Report of the Royal Commission on Secondary Education, Vol., V. on the Training, &c., of Teachers in Germany.

‡ Resolutions, as above, No. 9 (v).

have been "trained," and who consider that the student has not benefited by the experience. Obviously this criticism in each particular instance is based only on a limited range of acquaintance. Often, indeed, it arises simply from a prejudice created by meeting with a single unfortunate "trained" teacher, whose personal deficiencies are laid at the door of the institution which sought by training to remedy the same.

Such prejudices are of course not worthy of serious attention, but in the active discussion which has gone on in this country during the last five years, many thoughtful Headmasters and Headmistresses have expressed their views, sometimes not antagonistic to training, but with the desire to emphasize the proverb that the tree must be judged by its fruits. The present writer has taken some pains to find out the drift of these opinions by conversation with competent witnesses, for it is in conversation rather than in print that the practical man expresses his mind upon new movements that challenge his attention.

The commonest fault that is charged to trained teachers is that they do their work in a mechanical spirit; they have learned a system and adhere to it under all conditions. This is a charge which is often brought against Primary teachers who take posts in Secondary schools, but, while in some cases it may well be justified, there is plenty of evidence the other way.\* In fact, there is evidence that one motive which, in former years, tempted the Primary teacher to forsake the Primary school, was the wooden, mechanical spirit in which he was compelled by the Department to do his work, contrasted with the freedom and self-reliance permitted to him by his Headmaster in the Grammar School. This motive no longer operates to the same extent, and it may be fairly questioned whether it is as easy as it was ten years ago to find teachers of a progressive type of mind ready to leave Primary work.

In any case the argument cannot be employed to discountenance proposals for the study of Education as a professional obligation. The primary teacher does not study Education in the proper sense of the word at all; he is not required to do so, and the very habits of thought which such studies induce would only embarrass his work in a career where his main duty is to fulfil the task assigned to him by superior officers—managers, inspectors, and the Department. It is true that in a few of the training colleges, which secure the picked students from the list, it is possible to do some really scientific work,† but this is and must be the exception. The pupil-teacher has been drilled into the national system long before he comes to college for training, and it will not be denied that this "college" training is a chief factor in rescuing the student's mind from the limited range to which his previous career as a scholar and pupil-teacher in the elementary school had confined him. After all, the mechanical mind is a type that is due to native tendencies as much as to education; the man of

\* Comp., *e.g.*, evidence of Dr. Percival (Report of Select Committee of the House of Commons on Registration, 1891).

† I am acquainted with a few Training Colleges, residential and "Day," where work of this character is aimed at; no doubt there are others. The reports of H. M. Inspectors of Training Colleges afford ample evidence that such studies are encouraged, but the conditions are scarcely favourable.



independence will escape, by one door or another, from the bonds of red tape. We have plenty of dull mechanical teachers who have been born and bred in our secondary schools alone.

The error in thought made by those who utter these strictures is to assume that to "train" a teacher is to supply him with a number of rules and devices which convert him into a mechanical toy. Nothing, of course, can be further from the intention of those who are engaged in training. The habit of broad and independent judgment on matters relating to education is the main end to be sought by the study of Education; this habit teaches a man to seek for law and principle, and to reject rule of thumb.

6. On the other hand, there is a habit, essential to the good teacher, which is sometimes confused with the mechanical spirit. The teacher in a school is not a free-lance—he is bound by the law of his society; and his value as a member thereof depends largely upon his sense of order. He who has not learnt the habit of submission where submission is due, is not yet grown to the stature of the secondary school: "freedom, variety, and elasticity" can only be permitted to those who recognise the limitations imposed by their environment. The situation of the teacher as a member of a corporate body is one of the most important factors which govern the progress of educational reform. This progress has been, and always must be, slow, since every change must win the appreciation of all concerned before it can be thoroughly worked out. In few callings in life is it more necessary for each worker to maintain within himself an open eye, fixed upon lofty aims, while content to tread the even path of daily routine step by step with his fellows.

Now, there is considerable danger that our proposals for the study of education may tend to create a type of teacher full of clever plans and noble ideals, but, on that very account, reluctant to mark time, as he may think it, with his colleagues. Our young teachers "may be trained philosophically, apart from the practical experience of school life, and be led to dream dreams, to dwell upon hopes and aims for education and for their own life's work, which are out of harmony with the realities of things."\* Heaven forbid that either school or training college should seek to repress the moral and intellectual enthusiasm of young teachers, but enthusiasm is sometimes a cloak for the conceit of inexperience.

Manifestly this is a fault, sometimes laid at the door of training colleges, exactly opposite to the one discussed in the previous paragraph: and the cure for it must be sought in the opposite direction. The teacher who is ready to become the slave of a system must learn by scholarly studies, of a professional and general nature, to reach a higher intellectual standard. Our training colleges will be secured from the charge of system-mongering if they are brought in contact with other branches of study in our Universities,† and if an adequate standard of general

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\* "The Higher Training of Teachers," *Educational Times*, March 1, 1893.

† Resolutions, as above, 5 (i).



culture is exacted both from lecturers and students as a foundation for professional pursuits. They can then claim to be entrusted with that freedom from control which is necessary to habits of independent thinking.

On the other hand, the remedy for licence and discontent is equally clear. *Daily intercourse with children and with school* is the only remedy for those unsteady flights into regions of speculation to which both students and lecturers are prone.\*

7. Yet a third type of unsuccessful teacher is sometimes produced as a result of training. The "wooden" teacher has really not been trained at all, for he has not learned to think; and the self-satisfied teacher, despising everyone who lacks a training certificate, has also no proper *locus standi* in the profession, for he has no knowledge of things as they are; his mind rests content in a circle of theories and ambitions which are the product not of school life, but of lecture rooms and text-books. But we are often told that teachers come from training colleges with bright mobile minds, and with a modest appreciation of their own possessions, but nevertheless unable to produce good results in class teaching. Their "training" seems to have cultivated in them the idea that the child is educated by means of novel apparatus and devices; the supreme end is to make lessons "interesting," apart from any inquiry into the particular forms of interest which their pupils manifest.

They prepare elaborate notes of lessons, and trust to these and to their apparatus as if they were a fetish to be worshipped, instead of a prop which may be either employed or discarded.

This is no imaginary picture. The present writer has from various quarters heard such criticism, and he ventures to lay the blame for it in part upon the methods which have been established in our English Training Colleges, as a result of the system of examination for Diplomas. The tests of practical efficiency take the form of show lessons, given very often before strange children on a special occasion. The elaborate notes presented for this occasion are necessarily artificial, and instead of displaying—as they should, but cannot—an acquaintance with the actual children to be taught, they have to be adorned by the exhibition of meretricious additions, displaying the teacher's familiarity with modern devices. In the delivery of the lesson the evil is still more apparent, for the candidate is being judged by a false standard; it is *her* words, and *her* style, and *her* resources that are estimated, rather than the process resulting in the children's minds. The children, indeed, are chosen at random, and are of very small account in the performance! When we consider the immense influence which systems of inspection and examination have had upon the practice of schools and colleges, we are bound to attach importance to the mode by which these tests are applied.†

## SECTION II.

8. We have examined the views of critics, and of those who object to the study of Education, in order that we might gain some

\* Resolution, 3 (ii) (iii), 6 (ii) (1905-6).

† Resolutions, as above, 8 (iv).

hints as to possible dangers which may attend the pursuit. We are now prepared to investigate the nature of this study, surveying the field which it embraces. We shall then be in position to discuss the equipment that is necessary for an institution adapted to the purpose.

This inquiry is the more necessary because there is still a great deal of uncertainty attaching to the term "Theory of Education." It is often regarded as equivalent to what is very unhappily called "Applied Psychology." Those who use such a term entertain the opinion that the student must first determine the nature of mind and of its faculties (so called), and from these deduce doctrines of education. It must be admitted that English syllabuses of examinations for teachers give colour to this view, but our best authorities on psychology are not inclined to certify to the soundness of the applications.\* Education, regarded either as a science or an art, is no mere deduction from the laws of mind, but is an act undertaken by the adult community, by parents, by civil and ecclesiastical authorities of various kinds, for the welfare of the rising generation.† These authorities employ teachers who undertake to fulfil this duty, and since, in modern times, they are concerned mainly with the mental life of the child, they undoubtedly should seek the aid of the psychologist to gain a knowledge of mental processes. But their function neither begins nor ends here. It is not the form of the mind, but its content, which chiefly concerns the teacher. If he choose he may assert that his function is to cultivate the powers of imagination; but this phrase is meaningless unless it includes some account of the kind of images which are to occupy the child's mind, and this last investigation will lead him into regions which lie outside of psychology. In short, if anything is to be gained by employing the term "applied" to the science of education, we must regard it not only as an application of psychology, but of physiology, of ethics, of sociology, of politics.

Our exposition of Education surely takes a sounder position when it stands independently upon a footing of its own, and turns now to one auxiliary science, now to another, as it may require their help.‡

9. Regarded from this standpoint there appear to be three main fields of inquiry set before the student. First of all he must determine the *Aim of Education*: what is he to include in

\* "It is humiliating to reflect that the defunct doctrine of faculties, having first retarded the progress of psychology itself, should now be revived to darken knowledge under the guise of psychology applied to education."—Professor James Ward in the *Journal of Education*, Nov. 1890, "Notes on Education Values." I regret that the Committee on the Pupil Teacher System (Eyre & Spottiswoode, May, 1898), encourage the same standpoint, viz., that the theory of teaching is to be treated as deduction from Logic, Psychology, &c., and that they desire (p. 15) to prescribe once more a detailed course "to guide the lecturer."

† I have discussed and defended this standpoint in an article "On the Definition of Education," *Journal of Education*, Sept. 1896.

‡ An interesting sketch of the history of English opinion as to the scope of the science of education is contained in the late Mr. Turner's History of the Education Society (*Journal of Education*, April and May, 1887).



that welfare of the rising generation which is his concern? The question is not merely, or indeed mainly, one for the teacher: it is a "public" question, which is answered by the "public opinion" of each age and country in its own fashion. The teacher's influence is limited by the extent to which he can guide this public opinion.

This inquiry into the aim of education is, in fact, a difficult and grave investigation; it cannot be met by a superficial discourse on the harmonious development of faculty, or by vague aspirations after "the higher life"; it directs the student at once to ethics, psychology, and political science; and these will be of little avail unless aided by some experience of the world—the world of childhood and the world of manhood.

10. When this inquiry has been faced the student is met by another group of questions which may be associated under the title—*Administration of Education*.

He finds that the business of education is conducted, or practised, by a body of professional persons who are called teachers, but that their task is not a self-imposed one; within their own sphere they may indeed be absolute, but they are called to their work by various groups (or corporations) of the adult community, on whom, in the first instance, the responsibility for the welfare of the young is laid. The most primitive of these corporations is also the most primitive form of political and social organisation; it is the Family. The latest corporation to be summoned to this service is the State in its various forms of local and imperial organisation. Beside these we have the Churches with their lofty claims to guard the spiritual interests of the child, and many miscellaneous associations which in one age or another have found some motive for taking up the cause of education.

On what principles do these various corporations—the Family, the State, and so forth—base their claims to control the business of education? How shall these claims be reconciled where they stand in antagonism? What are the duties of the authorities whom these corporations create to fulfil administrative duties? What is the relation of the teacher to these authorities? Here are a series of questions which are of vital interest to the welfare of education, which are indeed at this moment attracting more attention in England than any questions relating to the practice of education.\* We are, in fact, seeking to set our house in order on the administrative side, in the hope that by this settlement we teachers may secure a position which will enable us with better prospect of success to fulfil our duty in respect of the third field of inquiry—the *Practice or Conduct of Education*.

11. Here we come into a region which is the province of the teacher, and of him only. A sharp line has to be drawn between the province of the administrator and of the teacher. The creation of the teaching profession involves the recognition of

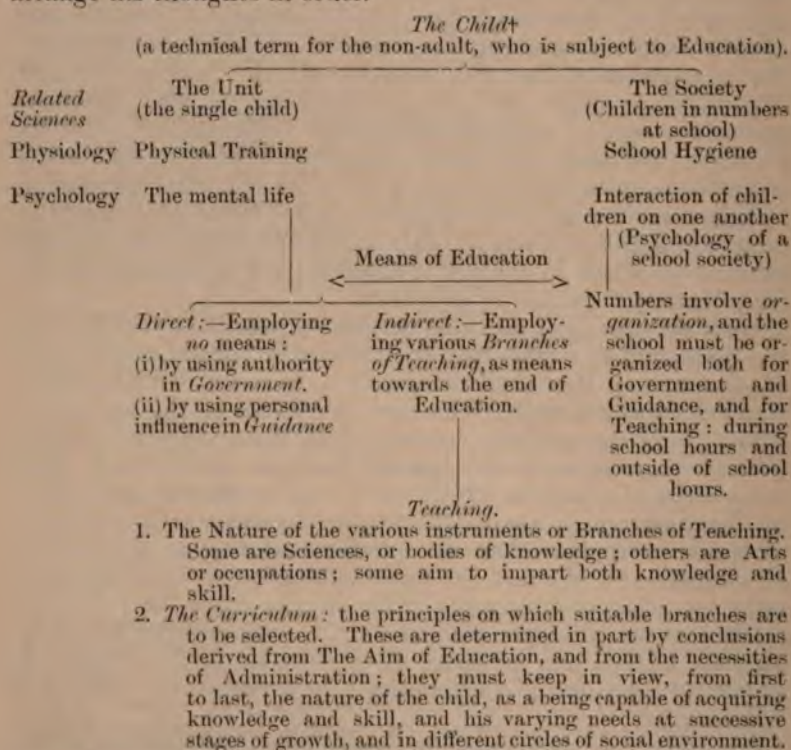
\* For a further analysis of these topics see Education Review (New York), October, 1897.



this distinction: for it constitutes a body of men and women who have gained by experience and by professional studies a special acquaintance with the matter in hand, to which the administrator—be he parent, Governing Body, or Technical Committee—has no right.

The following scheme offers an analysis of the topics which are embraced in the Practice of Education. It is not offered as in any respect final, but it exhibits an attempt to display the study of education from the standpoint here advocated, as a science, with a field of its own, not as a mere annexe to the text-book of psychology. Readers familiar with the later Herbartian literature\* will observe many points of similarity, and some points of divergence, between this scheme and the Herbartian analysis.

Among other service rendered by the Herbartian School, we must recognise them as the first to expound education on a systematic, correlated scheme; whether or no we agree with their conclusions, the study of their "System der Pädagogik" compels the student to copy their example in this effort to arrange his thoughts in order.



\* Compare especially Professor Rein's "Grundriss der Pädagogik" (translated as "Outlines of Pedagogics," Swan, Sonnenschein, and Co., 1893).

† It would involve too much detail to sketch the various fields of educational activity which, by an extension of the term "child" to various abnormal classes, directs us to the care of the insane and of the criminal, both younger and older.

3. *Method*: the principles on which the branches, when selected, are pursued.
  - A. *General Method*:—the general principles underlying
    - (i.) the acquirement of knowledge (Instruction),
    - (ii.) the acquirement of skill (in Occupations).
  - B. *Special Method*:—the application of these principles to the special conditions presented by the various branches concerned.

A note is necessary as to the first section in the treatment of Teaching. The inquiry into the nature of the various instruments or Branches of Teaching is, properly speaking, not a pedagogic inquiry at all, for it has no concern with the child or the school; but it is a necessary preliminary to any discussion of the Curriculum, or of Method. It is in fact a philosophic investigation of the content of the human mind, of the manifestations of human activity, as grouped under the terms which we employ to indicate the branches pursued in school. Taken as a whole, it should be treated as one of the "related sciences" which are required to aid the teacher in his studies, parallel to Psychology and Physiology in the above scheme.

The inquiry is surely necessary, for without it our discussion may be absolutely fruitless. Thus the teacher of algebra has learned his mathematics and may have become a competent mathematician, without having reflected upon the nature of algebra and of the mode by which this knowledge takes its place in the mind side by side with other mental content. He is now bidden to review his attainments in arts and science, and reflect upon their origin and growth from a new standpoint. It is remarkable that this inquiry is commonly regarded as superfluous, and yet it appears, at any rate to the present writer, as indispensable. Thus if it were possible for teachers of foreign languages to come to some agreement as to the essential nature of a native language, of a second language, and of the processes by which these grow in the mind, we should not be far from an agreement as to their place in the curriculum, and as to methods for teaching them.

12. It has been observed above that this scheme of topics embraced in the study of education is by no means offered as if it had assumed a final shape. It has certainly not taken such a shape in the mind of the present writer. His purpose in presenting it is simply to afford an example of the way in which education may be approached with some pretension to systematic treatment. A student trained to work upon an analysis of this type gradually finds that his mind strikes out for itself what the Germans call a "System der Pädagogik," a correlated set of doctrines embracing the whole field of his professional work. This system is not a water-tight compartment, closed against the entrance of new ideas; it may rather be compared to a set of pigeon-holes, grouped in order, to which fresh arrivals may be admitted as experience widens.

There can be no doubt that this pursuit of a "system," which is a common, indeed an essential, feature in the study of all the social sciences, is liable to danger. We have many



systems, Froebelian, Herbartian, "Public School," "Sloyd," and the like, each supplied with its armoury of philosophy and practice. Some become the slaves of the system, and find that "our little systems have their day;" another finds in the study of such systems a mental discipline which enables him to build up in course of years his own system, the product of a man's individual experience in his profession, adapted to the environment of his age and his society, but enlarged and enlightened by acquaintance with masters of his craft whose names are attached to the great systems. He willingly sits at the feet of these renowned instructors, but he cannot become their slave.

It is true, as we have seen above,\* that the teacher, working with many colleagues, subject to many "authorities," is required to submit his practice in many respects to the requirements of a system not of his construction. In the primary school he has to follow the Code and to obey the managers; in the secondary school he is the servant of many masters, and perhaps the severest of them all is the authority of tradition. Ours is not the only calling in which the practitioner is required to walk in ways which he would not have chosen. Now the "authorities," working on an established system, naturally enough desire the practitioner to follow the beaten track, and if they "train" him, if they equip him with "theory," it is in order that he may follow the track more efficiently. It is hard for the student, whether he be a student of education, of medicine, or of theology, who has begun to form a system for himself, to hit the golden mean in practice. If his studies have been pursued with that independence which is a mark of the scientific spirit, he will not find it easy to reconcile the realities of daily practice with the ideals to which his studies have taught him to aspire. But *the reconciliation is necessary*; necessary not only for the worker's own stability of mind, but for the ultimate attainment, by himself or others, of those very ideals which he cherishes. And those who undertake the training of professional men have surely this responsibility—to lay a foundation in the minds of young practitioners which will enable each one for himself hereafter to effect this reconciliation. There are doubtless a few gifted minds, the original thinkers of their time, for whom such a reconciliation is impossible; these are the "reformers" who raise the standard of revolution, who not only imagine but create a new system which may be the heritage of a new age. But institutions for training are not intended as a nursery of reformers; those who seek professional qualifications will be expected to do service in the profession, accepting the system as they find it. In due course, with the wisdom which comes not from the months of training but from years of experience, they too may hope to do a little in the cause of reform.

13. In this brief sketch of the ground to be covered in the study of Education, no reference has been made to the History of Education. This pursuit takes a prominent place in the

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\* P. 348.



syllabus of most training colleges, both English and foreign, and any proposal to dethrone it from this position will be stoutly challenged.

In previous paragraphs we have constantly employed the method of comparison, illustrating the situation in respect of Education by that presented in other professions. And it is suggestive to inquire as to how far the analogy will help us in determining the value to the young student of treating education from the standpoint of history. To the law student history is indispensable; it is equally so to the student of theology, for his theme is the history of the divine government of the world. But to the physician, or the chemist, or the engineer, the study of the development of his science, although interesting in the extreme, is of little service; indeed he can only understand the story *after* he has gained a clear insight into the principles of his science by observation and experiment.

What then is the situation with respect to Education? The question is perhaps easier to propose than to answer: for, from the review which we have made of the topics embraced in educational science, it is clear that in some parts of the study, in those namely which treat of Aim and of Administration, the historical method, which has borne such valuable fruit in economics, is indispensable; the present can only be interpreted by the past. But in the investigation of Practice we are surely compelled to adopt what is called the scientific method of investigation, analogous to the methods of the physician. Our subject of investigation is not Pestalozzi or Herbart, but—the child. The principal business of the student is to become familiar with the child, and with the assembly of children in a class and a school. It may be interesting to be informed that Pestalozzi discovered the principle of *Anschaunungs-Unterricht*, which is interpreted in many schools by object-lessons; but the information is valueless, or rather it is pernicious, unless the student verifies the truth of the principle by contact at first hand with children. And if he gains this experience and applies it rightly, the source from which it came is of small import.

The study of Education is, therefore, not easier, but more difficult, than the studies preparatory to other professions, because it has to be treated from two different standpoints. In one department the equipment required is that of the historian, and progress can only be made by those who have sympathy with the historical point of view; in the other department, in the study of practice, the historical method is of no avail, and tends rather to confuse the judgment. The more our training colleges approach the habits of mind which are cultivated in schools of Medicine, the more reluctant will they be to impart the art of teaching by discoursing upon the lives and deeds of teachers of earlier times.

If the argument from this analogy be accepted, it will be admitted that the history of education can claim its place among us only so far as it treats of the general development of national

culture and of the forms in which nations have sought to achieve culture by the administration of systems of education.\*

Now, this treatment of educational history is scarcely recognised as yet in this country; and, in fact, the administration of education is excluded from the syllabuses laid down for training colleges. Probably this exclusion may be justified; any extended inquiry into this branch of the science of education should be reserved for more advanced students. Further, very little attention has yet been paid to these studies; we have scarcely any literature similar to German works dealing with *Kulturgeschichte* and *Verwaltungslehre*. No doubt that interest in problems of administration which is one of the features of professional activity to-day will in time produce its literature; but at present this branch of study is certainly not ripe to be made obligatory on students.

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Now, this treatment of educational history is scarcely recognised as yet in this country; and, in fact, the administration of education is excluded from the syllabuses laid down for training colleges. Probably this exclusion may be justified; any extended inquiry into this branch of the science of education should be reserved for more advanced students. Further, very little attention has yet been paid to these studies; we have scarcely any literature similar to German works dealing with *Kulturgeschichte* and *Verwaltungslehre*. No doubt that interest in problems of administration which is one of the features of professional activity to-day will in time produce its literature; but at present this branch of study is certainly not ripe to be made obligatory on students.

The small literature which we do possess under the title "History of Education" is not, in the proper sense of the term, history, and Mr. Quick, the author of the most useful of such works, expressly disclaimed the title. The records of the principles practised by great teachers served indeed as the materials for history, but that is all. When these materials are supplemented by investigations into the common practice of pupils and teachers in bygone days, and worked up into a consecutive narrative by scholars who understand not only the practice of education, but the philosophy of it, we shall possess literature which may be properly denominated the History of Education.† But when we possess such a literature it may be questioned whether it will be appropriate fare for the average student of education—he must surely begin by learning to know the child and the teacher as they exist to-day.

There are several reasons which account for the prominence given to this branch of study among us. In the first place, biography is pleasant reading, and the subject, when handled by a stimulating lecturer, is always popular. There is, indeed, much that is calculated to fire the enthusiasm‡ of an earnest student in the records of the struggles of Comenius, of Pestalozzi, of Froebel. And the beginner is always attracted by studying what is concrete and individual in preference to the abstract and the general; he finds it easy to read of Froebel's observations of children, but difficult to grasp the psychology of self-activity.§ Our instruction in political history to children is mainly biographical, because we find that the child must lay the foundation for large

\* For the treatment of Education as a branch of *Kulturgeschichte*, compare Professor Earl Barnes': *Studies in Education*. (Leland Stanford University, California, U.S.A.) In Professor Barnes' papers I have found a better exposition of method, both in the treatment of the History of Education, and of Child Psychology than is usual in England or Germany.

† *Paulsen's Geschichte des gelehrten Unterrichts* may be cited as an example. Perhaps the best specimen in English is Parker's *History of Classical Education* (Essay I. in Farrar's *Essays on Behalf of a Liberal Education*. Macmillan, 1859; out of print).

‡ Prof. Foster Watson in *Journal of Education*, July, 1895:—"How is the History of Education to be used as a part of a Teacher's Training?"

§ Dr. Mitchell's view, quoted in the same paper

concepts of politics by familiarity with the deeds of a few typical heroes.

But, after all, our students are not schoolboys; and, if we permit them to escape from the severer discipline of psychology, on the plea that babes must have milk, we shall find that they will not gain from these biographies anything which will take the place of solid thinking based on personal observation of children. History has always been the refuge of weak-kneed students,\* who will cram the contents of a text-book when they cannot think for themselves. And with respect to enthusiasm, is it not somewhat dangerous to set ideals before students which we do not expect them to imitate? May not the outcome sometimes issue in a pseudo-enthusiasm which expresses itself excellently in an examination, but presently suffers reaction? We should think little of a medical man who required to be stimulated by an Harveian oration in order to feel inspiration for his professional task. His own knowledge of human suffering and human need constitutes his true "call." This suggestion, so frequently repeated, that the teacher requires some special spur to arouse his enthusiasm, springs from the picture of the teacher as engaged in a dull mechanical pursuit, which he only endures in the hope of a scanty emolument, and which he relinquishes on the first opportunity. The picture may not be a caricature in all cases, but those who pursue their labour in such a temper are hardly likely to be converted by educational biographies.

The only right basis for professional enthusiasm is experience; those who know the child, who know what the teacher can do on his behalf, need no further stimulus to duty; and enthusiasm, as has been often observed in other walks of life, is scarcely a virtue unless it be tempered with discretion: here is the silent monitor which moves the emotions in ways that the lecture-room and the biography can never rival. We can witness in America the mischief which is caused by, or exclusive devotion to, the cult of Froebel. The young enthusiast in such a "School" ignores his contemporary environment, and aspires to play the part of reformer before his eyes are open to the world about him. This narrowness of devotion to some peculiar sect does little to encourage the growth of educational science; it rather fosters a crop of patent "Methods" which choke the true grain like tares among wheat.

Other reasons for the prominence given to the study may be briefly noted. The example of Germany has not been without its influence. The historical method still holds the field in German Universities, and, so far as the study of Education is concerned, the scientific method of treatment is neglected, except among the Herbartians. For example, if a student takes "*Padagogik*" as a subject for a University degree, he is examined on Paulsen or von Raumer.

It must also be pointed out that the influence of examining bodies has done much to hinder our training colleges from taking

\* At Oxford in my time this was the accepted explanation for the length of the list in the IVth class of the Modern History School.



a free hand in this matter. History is a fatally easy subject to set a paper upon; in earlier days the examining authorities would have been somewhat embarrassed if they had not been able to prescribe "set books" and biographies in order to fill up the syllabus. So long as we adhere exclusively to the plan of testing professional ability by a series of printed questions, so long will it be difficult to encourage the scientific spirit in professional training.

Finally, it is often urged that young students, imperfectly trained before coming to the training college, find in this subject a useful exercise in composition and reading: it widens the mind, aids the student in the habit of comparison, and encourages literary expression. All this may be true, but when used for such ends, the study is a part of general education, and should not be classed among professional studies.\* Our teachers should certainly have gained the benefits which come from the pursuit of the Humanities in the school and the university; and these benefits are better secured by the study of national history in the pages of our great writers and poets, rather than by throwing the burden of general culture upon Training College lecturers. Teachers who have been permitted to learn the lives of great educators as a substitute for history gain a somewhat distorted view: they are apt to regard Comenius and Froebel as central figures in the European drama.

By way of summary, the present custom of setting students to read educational biographies would not be harmful if less importance were attached to it, and if it were excluded from the syllabus of examinations. It is more profitable, however, to older teachers, who from their wider experience are able to compare the Past with the Present.† The study of the history of Education, in any real sense, cannot yet be undertaken by us in England, because it has not been properly taken in hand by competent scholars, equipped for their task not only by a knowledge of Education, but of social and political history in all its branches. When it has been so undertaken it will form a valuable foundation for the pursuit of doctrine relating to Administration.

### SECTION III.

14. We may now consider some suggestions for the conduct of institutions which are engaged in the study of Education.

In all countries in which education is a matter of public concern, we find colleges or normal schools established for the training of the teacher; but the great majority of these, intended to equip teachers for service in primary schools, are required to serve a double purpose: the student is not only a student of Education but of various branches of general culture, which the members of other professions pursue in secondary schools and colleges before they commence professional training at all. It is

\* See Resolutions (as above) 1 and 2 distinguishing the period of General from that of Professional Education.

† See Quick's "Educational Reformers," Chap. I., and Dr. Wormell in *The Educational Times* (November, 1890 p. 435).



necessary, therefore, to consider the relation in which these two pursuits stand to each other, and a comparison between Medicine and Education will once more be of service.

The medical student, when fully qualified, has gained three qualifications during three distinct periods:

(a) As a boy he pursued a general education, and gained some certificate to attest that he could read and write, and that he had an elementary acquaintance with a few branches of liberal culture.

(b) Thereupon he pursued certain branches of science—Physics, Chemistry, Physiology, which he needed for his future profession, but which are not directly concerned therewith. These he may have studied in a professional school attached to a hospital, but he may instead have gained the qualification in a university or secondary school away from a hospital.\* During this period he may still be regarded as continuing his "general" or liberal education, but he has specialised with a view to his future career.

(c) Finally, he has entered upon a period of exclusive professional training in the science and art of Medicine.†

The student of Education has to pass through three similar stages, but they are not so clearly distinguished in our Codes and Regulations, because, first, the intending teacher, when a boy, is educated *in the same kind of place in which he will hereafter pursue his calling*. Hence the pupil-teacher system,‡ which was based on the belief that the teacher's art can best be acquired in a period of apprenticeship, occupying the years in which the medical student is solely engaged in acquiring the elements of general education. Secondly, those branches of liberal arts and science ((a) and (b) above), which constitute the substance of a liberal education in all professions, are needed by the teacher, not only for this purpose, but *also as the tools for the instruction which he will impart hereafter*. Hence the normal-school system of America, which ignores the distinction between the periods (b) and (c) above, and seeks to save time by letting the liberal education and professional training be pursued *pari passu*.

It is only in Germany, where the period of Normal training is extended over several years, that the three periods are clearly defined. In the *Präparanden-Anstalt*, the boy from fourteen to seventeen years of age gains a general education, similar to that obtained by a medical student in a secondary school; from seventeen to nineteen he pursues his liberal education, studying especially those branches which are especially needed by him hereafter as an Elementary School teacher; finally, for another

\* It is interesting to note that some medical men recognize that the time has come for the medical schools attached to hospitals to drop these branches of instruction, and to confine their function to professional studies. In the provinces, where the medical school is a faculty of a university college, this is already the case.

† Compare Resolutions as above, 1 and 2.

‡ Report of Committee on the Pupil Teacher System, pp. 1-3.

year or two he studies and practises Education in the Lehrer-Seminar.\*

In the opinion of the present writer, this sequence, which is followed in the training of medical students, and which the example of Germany exhibits as possible also for teachers, should be everywhere adopted, and the two pleas mentioned above, which are advanced in England and America, both for Secondary as well as Primary Training, on behalf of our present system do not outweigh the advantages which accrue from treating professional studies as a sequel to liberal studies. But no doubt there are many practical reasons of economy and expediency for maintaining the system in vogue, which lie outside the scope of this paper.

The question, indeed, only concerns us here, because of its relation to the study of Education, which cannot be profitably undertaken by a student who has not already reached an adequate standard of general culture. If an intending teacher, whether called Primary or Secondary, falls below this standard, he should not be encouraged to pursue any such course of study as has been sketched in the preceding paragraphs, nor should he rank with students in the professional schools of a University; his instruction should be mainly directed to improve his general qualifications, and his professional training should consist of some practical guidance in the teacher's art, without any pretence of psychological or other scientific basis. Teachers trained on such a modest scale have been found to do most useful work, and it is well that their range should be thus limited, rather than that their deficiencies should be covered by a veneer of so-called Theory, which is in no sense their possession, and to which, as is notorious, they attach little value.

I venture then to lay it down as an axiom that the study of Education should not be commenced until the intending teacher has passed through a previous "undergraduate" course of study, and has arrived at an age (nineteen or twenty years of age being surely the minimum)† when he can take up educational science with success.

*The distinction between Primary and Secondary Training.*—It will probably be many years before this desirable sequence of studies is adopted by Government in England for Primary Teachers, although there are many lecturers in Primary Training Colleges who would welcome such a reform. These would be glad to divide the two years of Training College life into two parts,—the first, of perhaps eighteen months, being devoted to "general" studies, the last six months spent exclusively in professional training.

\* The arrangements differ in various parts of Germany. Thus, in Saxe-Weimar, the candidate spends the whole six years from fourteen to twenty in one institution. The Präparandenanstalt of Prussia is equivalent to the first four years of the Lehrer-Seminar of Saxe-Weimar. But these differences are unimportant. The essential feature of them is the sequence of the three periods, and especially, the deferring of professional training until the general qualification in liberal studies is completed. (See *Stätistisches Jahrbuch der Höheren Schulen*—published annually by B. G. Teubner (Leipzig).

† Resolutions as above, 2 (i).



If, however, this separation and sequence of study is difficult to achieve in England for Primary Training Colleges, there ought to be no such difficulty experienced in planning for the training of Secondary Teachers. For it is by this time abundantly clear that the separation between English Primary and Secondary Education is not to be based, as in Germany, upon social or caste distinctions, but *upon the standard of attainment*. Hence the minimum qualification in general scholarship and culture required of the Secondary Teacher will always be placed higher than that required of the Primary Teacher.\* The Registration Bill introduced by Her Majesty's Government in 1896 placed this minimum qualification at the standard of the pass degree of a University, and teachers as a rule accept this standard. Indeed, one of the chief obstacles to the introduction of Education as a branch of study into our Universities lies in the determination of undergraduates to secure a good degree in Arts or Science, and the attempts which have been made, particularly at Cambridge, to divert the attention of undergraduates to the study of Education have met with no success.

The question of differentiation between the Primary and the Secondary Teacher is a delicate one, for it is linked on to the administrative difficulties which have been created by the effort to organise Secondary Education. It is, however, necessary to deal with the subject here, for one finds it stated now and again that there is no difference between the qualifications of the teacher who is preparing to teach in a village National School or in a large Public School. I venture to urge that the difference is great. The University man who has gained his experience at Clifton or St. Paul's would be just as unfit to take charge of a National School as the village schoolmaster would be to manage a Fourth or Fifth Form. True, both men ought to have the same general knowledge of the principles of Education and of child-nature; the science of Education *per se*, is the same for both; but there is an essential difference in the scholarly qualifications required by the two; and there is a difference equally essential in the practical experience which each needs for the adequate discharge of his duties. The man who is to teach in a Secondary School of a given type should learn, during his probationary period, the traditions and environment and ways of the school society in which he is to pursue his task; the man who is to teach in a Primary School is also required to serve a probation under conditions similar to those in which he is to practice his calling hereafter; and in each case this probation is regarded as an essential element in the training of the teacher.†

If, in time to come, the standard of attainment for the Primary Teacher is raised up to requirements of a pass degree, then the first of these differences will have disappeared; but the differentiation created by the necessity for probation will not disappear so long as we possess varying types of schools, some of which are classed as Primary and others as Secondary.

\* Report: Resolution 5 (iii).

† Report: Resolution 4 (iii).



The real difficulty created by this discussion is not due to any divergence of opinion as to the facts, but rather to personal elements of feeling. The teacher whose sphere of work lies in Primary Schools is naturally sensitive to any proposition which may be construed to reflect upon his attainments or status; his colleague in the Grammar or High School is equally suspicious if *his* task is regarded by the nation as of "secondary" importance; it is only by mutual good understanding that these animosities can be allayed. Other professions, when seeking to achieve union, have encountered similar difficulties, and have overcome them. The country doctor and the city physician are engaged in widely different spheres of duty, and become qualified by recourse to very different modes of training; but they find it possible to stand side by side as members of the medical profession. We may fairly anticipate a similar result in relation to Education. Such a result, however, can only be achieved by a recognition of facts as they are; hence it has seemed to me to be necessary, in discussing schemes for the study of Education, to point out the difference between the study and the experience required by teachers in those two types of schools, which we have learnt, during the last ten years, to classify as Primary and Secondary respectively.

15. Assuming, then, that our student has reached at least the age of nineteen or twenty, and has gained a general liberal Education, at school and as an undergraduate, equal to the standard of a University degree,\* how should he spend his time during the period of Training? His business is to study Education, and, obviously, so to pursue the study as to gain some practical understanding of its bearings on the business of school and some skill in the art of Education. To have read a few books on the subject is no doubt profitable, especially if the books have been read *con amore*, and not merely with the view to answering printed questions, but such reading cannot be described as scientific study. If this were to be countenanced, we should revert to the methods of pseudo-scientific study which prevailed in Europe before the days of Bacon. There are two characteristic features in equipment for all professions which should be here brought into relief. (i) An art is studied by the contemplation and imitation of good examples. Such imitation of course may amount to nothing more than mere slavish copying (see p. 10 above), but even then, if the model be good, the copyist will prove a more efficient workman than if he had been left to his own devices. The present writer is aware that this need for "contemplation" is disputed in certain quarters, but the general principle as governing the acquirement of an art will scarcely be disputed. Unfortunately the term "Model" has come to be identified with mechanical methods of training,

\* It is not likely that any Council of Registration will at present require the *tittle* of a degree from candidates. There are many pursuits which lie outside the range of arts or science degrees, but which may well be taken up by intending teachers, since they play an important part in the curriculum of our schools. Drawing may be cited as an example. (Compare Report: Resolution 2 (iii).)

under the idea that the lecturer on Education or other experienced teacher should display himself as a model of perfection to his students. Hence there has been a reaction in some quarters, and the requirements for teachers' certificates generally omit any demand that the student of Education shall have been present at demonstrations. And an equally unfortunate result is seen in the neglect by lecturers themselves of the art of teaching. The present writer has known lecturers who never themselves teach children in school, for fear that students may imitate their example.\*

(ii.) A science can only be properly studied on a basis of practical experience; or, in other words, theory and practice must go hand-in-hand. This principle of study is readily admitted by all scientific men, but they will as readily agree that it is a doctrine easier to preach than to practice. Even in medicine, where one might suppose that the student would be compelled at every turn to appeal to experience, we find that the lecture-room and text-book often serve as a substitute for work at first hand in laboratory and hospital ward; hence it is no matter of surprise to find efforts to conduct the study of Education which fail to bring the student into close contact with children and with school life. The centre of interest in professional training is the child.† Psychology has been found to be of value to the schoolmaster, but only so far as he is able to apply his knowledge to the problem of teaching and of influencing his boys.

There are countless views and theories of Education, and a student may spend years in studying and comparing these without gaining much aid in practical equipment. In the teacher's calling, as in every other, theory is pernicious unless it springs from and returns to practice. Each lecturer, each student, needs to repeat in his own person the process of correlating doctrine with experience. Only by insistence upon this relation can we allay that distrust of schemes for Training which is still felt by many of our best teachers, who have been led to suppose that "theory" is something apart from and alien to the proper business of the school. The theoriser, indeed, can never be safe, unless he follow the inductive method and builds up his doctrine out of his personal experience as a teacher. Obviously, here, as everywhere, the isolated experience will be enlarged and philosophised by the aid of allied science,‡ and by the labour of other students and thinkers; but the pupil and the school serve as a foundation on which the edifice of a teacher's system of Education§ must be raised.

\* Some day one may hope that all lecturers will be required at all times to be *teachers*; at present many professors and lecturers are content with the oral delivery of essays. The plea made by Professor Henry Sidgwick some years ago ("New Review," May, 1890) against "lecturing" might at least be urged in classes where intending teachers are under instruction; since example, here as everywhere, produces its inevitable effect.

† Using the term "child" as a technical term to indicate pupils of all school ages.

‡ Report; Resolution 3 (i) (a).

§ I use the term "system" by analogy with the German phrase, *System der Pädagogik* (see p. 353 above).



16. These two principles taken together supply the chief argument for the plea that the student of Education must be *intimately* associated throughout his period of training with one or more good schools. The student, in fact, is only distinguished from the ordinary practitioner by the fact that his efforts in the guidance and teaching of children are done under direction, with more forethought and formal preparation than is possible in the busy practice of ordinary schools. If, for example, a student is set to teach Algebra, he must inquire into the nature of Mathematics, and into the mental processes by which the ideas of algebraic symbols are acquired; he will prepare each lesson, step by step, referring every stage of his operations to the theories which it illustrates. In later years, as a practitioner, he will have no leisure to think out the formal steps by which he conducts his work; nor will he need to take this trouble, for his training will have given him correct habits. The preparation which occupies the beginner for hours of anxious thought can be completed by the experienced teacher in a few moments, just as a skilled physician can make a rapid diagnosis of a case which occupies a medical student for days, since the latter is only acquiring the habit of thought, which has become the familiar property of the physician by long usage.

If, however, it is important for a medical student to give prolonged attention to one patient, it is necessary that the student of Education should study one child or one group of children during a much longer period. For our pupils are not placed in our charge merely as a temporary interest, to receive a lesson or two and then be dismissed, but we take charge of them during a long period of growth and development. A single lesson, or half-a-dozen lessons, imparted to a strange class cannot enable a student to watch the processes of Education; his observation must be repeated and prolonged, if it is to produce definite results in his mind. Further, the child is not, as in medicine, an isolated subject for study, but he is a member of a society, of a corporate body which we call a school. The student seeking to study the processes of Education among children should become intimate with the daily life, the complex influences which play their part in the school society.

How, then, can this intimate association be secured? The report to which I have so often referred indicates two methods which may be employed as supplementary to each other. First,\* there should be Practical Work, under the direction of demonstrators or lecturers, comprising—

(a) Observation of the methods of teaching, followed by the lecturers and other experienced teachers.

(b) Continuous teaching, by the student, of a class, under competent direction and criticism. And for this purpose, a "School of Demonstration and Practice" should be established in charge of the lecturer of the Training Department or Faculty. Where this is impracticable, it is desirable that intimate and continuous association be maintained between some recognised

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\* Resolution 3 (ii).



Secondary School in the neighbourhood, and the lecturer and students who take a share in the teaching and training of its children."

In the opinion of the present writer, this necessary intimate association can only be attained when a School of Demonstration and Practice is incorporated with the institution for Training.

Secondly, there should be Practical Work, apart from the institution for Professional Training, in "an approved Secondary School, in order to gain a knowledge of school methods and management under the direction of the Principal and other members of the staff."\*

It is easy to see why this second form of Practical Work is necessary. The teacher whose study of Education has been confined to the society of lecturers and fellow-students has not realised the difficulties which face the teacher day by day in the ordinary life of school; the ideas which he gains by some experience in an average Grammar or High School enable him the better to understand the problems which it is the business of his lectures to interpret by the aid of Theory. Such an outside experience is, perhaps, not so necessary in cases such as that presented by The Ladies' College in Cheltenham or The Maria Grey College, where the students come into close contact with a large school working under ordinary conditions, but in a case like that of the University Seminar at Jena, where the School for Practice is very small and entirely controlled by the needs of the Seminar, the necessity for supplementary experience from outside is keenly felt; hence the peculiar combination of methods found at Jena for the training of *Gymnasial-lehrer*.†

The importance of this practical work in an ordinary school is keenly felt by teachers who have no further sympathy with training, and their influence both in England and everywhere on the Continent, tends to depreciate the necessity for practical work of the other kind, under the charge of lecturers and demonstrators. But it needs very little argument to show that such provision is imperative for sound training. It is surely dangerous for lecturers to be discoursing and writing on Education from year to year without being required to bring their doctrine to the test of experience in the life of children. If they are merely visitors to schools, doing work which approaches the conditions of the Sunday School, ignorant of and unconcerned in the life of the children whom they instruct, they are exposed to the very dangers which from the beginning of time have produced "science, falsely so called." The Training College needs to give a daily demonstration of general school discipline, of corporate life in the school society, of the continuous development of pupils from year to year, of a complete scheme for the curriculum worked out in its details. Much that the lecturers may advance on these topics will be abstract theory and destructive criticism unless they are challenged to exhibit their faith by

\* Resolution 3 (iii).

† I described this method in a Memorandum to the Royal Commission on Secondary Education. (Vol. V. of R. C. Report.)

works. Possibly we lecturers, when subjected to such an ordeal, would find our discourses diminished in volume, but the quality of the same might be enhanced!

So with reference to the students. They need to be convinced that they are engaged on responsible work, that they are not mere visiting amateurs; they must supervise written work, care for general habits of order and attention in their pupils and in their own performances; they must feel, in fact, that they are really bearing a part in the school which gives them an opportunity for service. How can a student even grasp the bearings of child-psychology if he is not given the opportunity of closely observing the behaviour of a few children in and out of school for some considerable time?

The chief objection entertained to the proposal is based upon kindly fears for the welfare of the children; it is supposed that they will suffer in the process of being practised upon.\* Unfortunately the suffering is witnessed in ample measure apart from training, since every teacher has to begin with some group of children, and those who fall to his lot at first may be accounted sufferers from his 'prentice hand. No increase in the total amount of suffering can be discerned in proposals for Training; the only fair criticism arises from the query whether, in a School expressly devised for Demonstration and Practice, the inevitable "suffering" is not being allotted *in extra measure* to the children of such a school, for the benefit of other children who hereafter will escape the attentions of raw beginners.

This criticism is adequately answered by the experience of Training Colleges and Seminars, in England and abroad, where such schools have been established; and the answer may be compared with the experience of patients in hospitals which are used as training grounds for medical students.

There is sufficient evidence to show that schools attached to Training Colleges are not regarded, by those best able to judge, as inefficient. There are several in London—Primary, Secondary, and Kindergarten. There is the famous little school at Jena, conducted by Professor Rein; there is the equally famous Horace Mann School, a secondary school, charging high fees, in New York. The parents in all these institutions prove their appreciation of the education by sending one child after another, and by paying, in some cases, very substantial fees. The explanation is to hand. A Demonstration School is bound to be kept up to the mark, or else it would bring the whole institution into disrepute. It stands before the public gaze in a way that other schools do not. Its staff are not only teachers of the children, but demonstrators to the students; they cannot assume such a position unless they are efficient. Further, an amount of attention is bestowed on every part of the organisation, the curriculum, and upon each individual pupil, which is neither possible nor necessary in the ordinary school. Against these advantages there is, undoubtedly, the necessary evil that the pupils are taught by a greater variety of teachers than is usual elsewhere, and many of

\* Cambridge Conference, 1896: Rev. T. Fowler, p. 113.



these are beginners. Nevertheless, the beginners are obliged to make careful preparation for every lesson, and thus the evil is greatly diminished.

So far as the boys are concerned, the work of education goes on in a Demonstration School, such as that at Jena, exactly as it does in other schools. True there are generally several adults in the room as well as the boys, and when a student is teaching the class the form master is also present. The boys, of course, know why he is there, and know that the student is a student; but it is the custom of the place, and the process of teaching is not disturbed. The whole institution is organised so that Training may proceed without disturbance, and boys become quickly habituated to the system.

This is an additional reason for having a school wholly devoted to the purposes of Training; there is less disturbance and irregularity in such an arrangement than in plans which require students and demonstrators to go to other schools as visitors. In the latter case special arrangements are always necessary, and the disturbance of order is an evil which pupils feel as much as their teachers. The teachers are always willing to take the necessary trouble, but the pupils can hardly get over the feeling that the instruction by their visitors is of an amateur type.

It will be evident to the reader that the staff of teachers in a School for Demonstration and Practice, if they also act as guides to students, must increase beyond the provision necessary for the school classes; but this is a question of finance, and is not fundamental to the problem before us. There is no doubt that Training for any profession is a costly process, and the work will be badly done if it is not adequately supported. But the lack of means, while it may lead us to hesitate to embark on schemes of Training, ought not to serve as a plea for countenancing schemes which tend to injure rather than improve the teachers' power. If it is expedient to train teachers at all, it is surely expedient to conduct that Training on principles which the experience both of our own and of other professions have approved.

17. Much that has been hitherto advanced in this essay is based on experiences which the writer gained while studying abroad, confirmed by some practice in working with teachers and students in London. Everywhere the same conclusion has been presented; wherever lecturers and students live in familiar responsible relations with children, there the work in Training bears fruit, and finds final acceptance both among the body of teachers and among parents.

Another important feature in plans for Training deserves notice, because it has an important bearing upon the thoroughness with which the business is conducted. It is customary in most Training Colleges to hold week by week an important function called the "criticism hour," or *Kritikum*, which consists of two parts, first, attendance in a class-room to hear a lesson given by a student; secondly, criticism of this lesson. Now, very much of the efficiency on the practical



side of Training must be traced to the influence of this plan, and it becomes an important question as to how this criticism hour can be managed so as to produce good results.

In England, and in some "Seminars" abroad, the plan usually adopted is so essentially different from that found in the Jena and other Seminars under Herbartian influence, that it may be worth while to indicate the contrasted features side by side.

#### AT JENA.

(a) The student selected for criticism has been teaching his class for some weeks previously in a subject assigned to him under the direction of a Demonstrator, who is the form-teacher of the class in question. Each class of the school and all subjects are reviewed in turn during the term.\*

(b) The other students and lecturers are expected to have witnessed previous lessons of the series in order to qualify themselves for criticism. They are also expected to know the children who are taught. They also examine the students' lesson notes for the whole series of lessons.

(c) The discussion and criticism is delayed for at least twenty-four hours. The student who has taught writes a self-criticism under assigned headings in a book kept for the purpose. Another student writes a criticism under similar headings, a third keeps a record of questions and answers. All these are brought next day to be read point by point in the "Kritikum" hour.

(d) The chairman of the "Kritikum" (Professor Rein) guides the discussion, but contributes as little as possible himself, except in a final summary. It is expected that the two written criticisms will have elucidated the main matter for discussion, and the whole is managed as a debate under the chairman's control:—every keen student has a chance of expressing his views so long as he keeps to the point. The interval of 24 hours has enabled everyone to think out the bearings of theory on the performance to be criticised. The Demonstrator under whose guidance the student has taught often acts as his supporter against hostile views.

#### COMMON PRACTICE.

(a) The lesson subjected to criticism is an isolated performance—very often an "object" lesson. The student prepares this, as it were, for exhibition purposes, not as a part of his regular routine in class work.

(b) The lesson being an isolated performance, no such previous observation is possible. The children play a very small rôle, and no judgment on their progress from week to week in the care of the student is possible.

(c) The criticism follows immediately after the lesson is given. No written criticisms are prepared (see, however, Welton's valuable "Note-Book for Criticism Lessons," Macmillan and Co., 1897). The Principal, followed by one or more lecturers or students, makes remarks, the student defends himself perhaps, and the Principal concludes.

(d) Of all this thorough sifting of principles worked out in practice there can be very little, for the children are of less importance than the apparatus; the teacher is regarded mainly as a performer. The criticism is necessarily casual, for the critics have not had leisure to order their thoughts. The Principal and his staff, by long experience, are able to pass judgment, but the students are usually dumb; they cannot so rapidly summon their thoughts. Hence they *do not learn the habit of criticising*.

\* The student is required to make full memoranda of each lesson in a manuscript book which is open to the inspection of any member of the *Seminar*. His notes or lessons are not drawn up on any fixed traditional scheme, such as that of Matter, Method, Illustrations, which is so common with us in England. He is bidden to anticipate, so far as he can, what he and his pupils will do and say during the coming lesson; his only guide in constructing the method of his lesson is psychology. The "demonstrator" is expected to supervise and correct these notes; he is usually present while the student teaches, and often takes the student's place for a few minutes or even for a whole lesson at times. (See *E. Scholz, Ordnung des Pädag. Seminars und der Übung's Schule in Rein's Annual "Heft."*—Volume III., 1891, published by Beyer und Söhne Langensalza.)

AT JENA.

(c) *Additional Features.*—This discussion only forms one part of the business of the meeting. It is prefaced by the minutes of the last meeting, which are written as a valuable exercise by some student. This is followed by an account, rendered by each Demonstrator, of the week's programme in every subject, and of any exceptional occurrence in discipline, etc. Each of these items may be discussed or challenged by students, and thus everyone is put into possession of the plan of the curriculum and of the whole theory on which the education is practised. The meeting is in fact a weekly teachers' meeting, of which the criticism only forms the last item.

COMMON PRACTICE.

(c) English Primary Training Colleges often have a Practising School attached, but the curriculum is largely determined by Government, and does not come under formal discussion. The student, in fact, is not expected to relate theory to observation and practice, except in so far as his own methods of preparing lessons are concerned.

Hence no such discussion of the time table and of the course of progress in each class is desiderated.

There is no doubt that this elaborate discussion, written and spoken, as pursued at Jena, incurs danger of its own. Men with a love for hearing their own voice will waste much time, and it sometimes looked at Jena as if a single lesson to children would suffice to create a new *Pädagogik*. Indeed, so prone are the Germans to "theory," that one is surprised to find that they pay any attention to Practice! In fact, this little "Übungs-schule" in Jena is the salvation of the Herbartian movement. It brings the windy theorist to book. I have known a man who proclaimed a new patent plan for language teaching to be reduced to very small dimensions after he had given six lessons to boys, followed by an hour of public criticism. And, as a stimulus to independent thinking, to industry in study, and to painstaking practical work, the plan of the Jena Seminar has surely no rival. Every student knows that he will be judged in open court, and that all can speak their minds freely. The University man who wants to keep an open mind finds the system to suit him; if his own knuckles get rapped he has the pleasure of returning the courtesy, and he may challenge the views of Demonstrators and of Professors if he feels sure of his ground. For the science of Education is not yet a completed text.

Unfortunately for Germany there are few Universities where such thorough laboratory methods are welcomed. At Leipzig the present writer attended a Seminar conducted by a Professor of Education, which would have been a disgrace to the poorest Diocesan Training College in England; but then this Professor publicly avowed his disbelief in the serious study of Education!

One difficulty which is encountered by English Training Colleges in following the Jena example must be laid at the door of the examination system. The bodies which examine teachers encourage the preparation of "show" lessons, meretriciously adorned with apparatus and elocution, but not forming a part of any continuous set of lessons to a real class of children.\* If the reform indicated in Resolution 8 (iv.) of the Joint Committee's Report could be introduced into the examinations conducted by

\* See Report: Resolution 3 (ii) (b). 8 (iv).



the Cambridge and other examining bodies, we should quickly realise a revolution in the conduct of criticism work in Secondary Training Colleges. This, at any rate, is certain, that when University men and women take to training they demand methods of criticism and discussion of a more independent and philosophic character than suffice for Queen's Scholars of 19 and 20 years of age.

18. One other argument, on behalf of associating a school with institutions for training, cannot be passed by without brief notice; this is in relation to research and progress in method.

It is recognised in institutions of all kinds for training, for an engineer, or a chemist, or a physician, that the work of equipping students proceeds *pari passu* with an active interest in improved methods. The student is trained in part by observing the efforts made by those who train him to investigate the principles of the art in the light of recent research and experiment. Now, it is obvious that this element in the training of teachers can only be secured if the lecturers have continuous charge of a number of pupils for whose continuous education they are responsible.\*

For such purposes it is not necessary that a wealthy school should be secured. In America we have some examples of Demonstration Schools attended by children from the wealthy classes, paying high fees,† but elsewhere the contrary is the case. It is remarkable that much of the best work in the study of Education has been done by teachers whose schools were of the meanest kind—Pestalozzi's work offers, perhaps, the most striking example. Professor Rein has only now, after ten years' labour, been provided with a respectable building; hitherto he has had to conduct his small school in part of a private house in a back street. The fact is that Education is not finally an affair of bricks and mortar, but of spiritual and intellectual influence; and if we delay practical work until we can secure model equipment, we may never commence at all. The school should be situated, if possible, near the suburbs, in order that physical education in games may play its proper part; hence a couple of private houses in a suitable neighbourhood might well serve as a modest beginning, supposing that no better centre for the work were available. The Froebel Institute is now housed in noble quarters, but it was prepared for by a private institution, conducted by Madame Michaelis in her own house. There is no need to label such a school with the unhappy term "Model"; the chief effort of the manager should be to provide an efficient and adequate staff of instructors; if these are provided the students will learn what education among children really means, although the latest improvements in apparatus are not to hand. The one indispensable need in such a school is teachers, equipped by training and experience to supply the needs both of children and of students, and realising that educational science is to be promoted, not by discoursing upon theories of what might be done, but by demonstrating what can be done.

\* See Report: Resolution 3 (ii) (b). 8 (iv).

† The Horace Mann School, *c.g.*, belonging to the New York Teachers College in Columbia University.



It may be worth while in concluding this plea for the School of Demonstration and Practice to indicate how students and demonstrators pursue their daily work. The classes should be small; fifteen or twenty is quite sufficient for the purpose. Each class is in the hands of a form-teacher, who acts to some five or six students as Demonstrator. Each of these teaches some "subject" to the form for at least a term, preparing full notes of lessons, which are supervised daily by the Demonstrator. He is also generally present when the student is teaching, giving constant informal criticism between lessons and sometimes taking his place. The senior of these demonstrators is the master of the school, relieving the Principal or Professor of many of the duties in relation to parents and pupils which are elsewhere performed by principals of schools. But the Principal in the last resort is responsible for the curriculum and oversight of the whole place.

Thus a school of 120 pupils divided into six classes would provide training for some forty students, and would need to be staffed by at least six teachers, all of whom, being demonstrators also, must have good qualifications and skill. It will, however, be readily agreed that no one ought to be connected with Training College work who has not proved his ability in teaching children. Even lecturers who are only concerned with psychology, or with general subjects such as history and mathematics, ought surely not to be permitted to teach intending teachers unless they can set an example in method.

19. Our inquiry into the methods pursued in Training Colleges has so far been only concerned with the student's inquiry into the Practice or Conduct of Education (see p. 15 above). But since we have recognised (pp. 13—15) that *The Aim of Education* and *the Administration* of Education should also come within the student's range, we must observe the method by which these departments of the science are to be pursued. We have already (p. 19) noted that a double qualification is required for the complete study of Education: while in the study of Practice we need habits of observation and methods of scientific thought similar to those of the physician, our inquiries into Aim and Administration are paralleled rather by the methods of the School of Economics or Political Science.

Thus we find in Germany that the recent elaborate work on the Administration of Education has issued, not from a *Pädagogisches Seminar*, but from a Civil Servant in Berlin.\* In fact, we have to recognize that these two departments of Educational Science are not the exclusive preserve of the teacher; but, in the study as in public life, come within the range of other fields of scientific research. The Aim of Education is fundamentally an ethical problem; it concerns, and is determined by, the "man in the street" as much as by the teacher.

\* Das öffentliche Unterrichtswesen im Deutschen Reiche u.s.w. Von Dr. A. Petersilie, Professor und Mitglied des Königl. Statistischen Bureau in Berlin (William and Norgate, 1897, 2 Vol.) (Part of a long series of *Handbücher der Staatswissenschaften*.)

And Administration must be treated as a part of Political Science.

20. So much is said, not by way of dismissing these important topics from the scope of the Training College curriculum, but merely to show the range of interests which students of Education may share with other students of the University standard. The intending teacher invited to study Education has, indeed, an exhaustless field of intellectual interests presented to his view. On the one hand he has much in common with the student of medicine, and with the problems of biology, which have done so much to transform the thought and method of our age: the child becomes to him the central interest of his professional life. On the other hand, he finds himself concerned in a great national movement, with great traditions reaching back, as we are freshly reminded to-day, to the founders of our English race in the days of Alfred the Great; this movement plays its part not only in the wider arena of politics, but in the corporate life of each family and school society with which the student becomes familiar. In the Aim of Education he faces a problem which sets him squarely thinking on the purposes which shape his personal life; in the Administration of Education he is made to feel himself a citizen, a servant of his nation, a fellow-worker with all those who give of their best to the service of society, in city, nation, or church.

Nor is this all, for, by tradition and training, the teacher must be a scholar. Now, other scholars, when they enter on a profession, may put away their books and find their main intellectual interests in their profession: but, with the teacher, these favourite studies remain as a permanent part of his professional occupation, and he usually takes up other kindred studies as the needs of his school curriculum require.

At present this "scholarly" aspect of the teacher's life still continues to claim the chief attention from those who consult for his welfare, and nothing has been advanced in this Essay to detract from the arguments for maintaining a high standard of scholarly attainment. But the endeavour has been to exhibit the study of Education as a pursuit which in itself is worthy of highly-trained minds, and which must be seriously taken in hand by the leaders of our profession, if they aspire to claim recognition as a factor in the destinies of the nation.

The nation at large is still profoundly sceptical as to the value of education and culture. It was the fortune of our people in days of darkness and defeat to find a leader in King Alfred, who could teach as well as rule his people. The foundations of our national life were well and truly laid; but seldom in later ages has our country called to mind those early lessons. Yet who dare assert that England, with her pride and power spread to the ends of the earth, can afford to despise the resources of culture and of character. Or are we waiting till adversity once more drives us to seek wisdom?

These are questions for the open market as well as for the school. But they touch deeply the honour of the teacher. If



he desire to convince his countrymen, and especially the rising generation, of the importance of the task, he will only succeed if he adopt those laborious methods of professional improvement, which are followed everywhere by the men and women of our time who aspire, whether in lofty or in humble spheres, to do service to society; he will, in short, recognize that the calling of a teacher involves a life-long obligation to the Study of Education.

J. J. FINDLAY.

## APPENDIX I.

### *A Brief Bibliography of Books and Pamphlets relating to the Training of Teachers.*

#### ENGLAND.

*The Report of the Royal Commission on Secondary Education* contains the most comprehensive discussion of the subject of recent date (Eyre & Spottiswoode, 1895), Vol. I., pp. 70, 71; 198-208; 321-329. The evidence of various witnesses (E. E. Bowen, Sir J. Fitch, Miss Beale, Miss E. P. Hughes, Miss A. Woods, Mr. Barnett, and others) should be read therewith (Vols. II.-IV., and Index of Evidence, Vol. VIII.).

*The Report of the Select Committee of the House of Commons on Teachers' Training and Registration Bills*, July, 1891, is also valuable. The evidence of one expert witness, Professor Laurie, of Edinburgh, is also reprinted in the following:—

*Teachers' Guild Addresses and the Registration of Teachers* (Rivington, Percival & Co., 1893).

The following are selected from a large number of articles contributed to educational magazines:—

#### *Journal of Education*—

April, May, 1887.—*Turner*: History of the Education Society (founded 1875). With this should be read—

*Bain*: Is there a Science of Education (London: Co-operative Printing Co., 1879); and *Payne*: Contributions to the Science and Art of Education (Hodgson & Son, 1874). These illustrate the course which the Theory of Education has taken in England.

January, 1891.—*Laurie*: The Philosophy of Mind in relation to the Preparation of Teachers (also in volume as above).

June, 1892.—*Foster Watson*: Proposals for a High Degree in Education in the University of London (see also March, April, 1893, on the same subject).

April, 1894.—*L. C. Miall*: Pedagogy and Psychology.

June, 1894.—*Sully*: Psychological Method (see also *Educational Review of New York*, November, 1892. *Sully*: Service of Psychology to Education).

June, July, 1895.—*Foster Watson* and others: Use of the History of Education as Part of a Teacher's Training (Conference of Teachers' Guild at Birmingham).

September, 1895.—*Beale*: Professional Education of Teachers (also printed separately as pamphlet).

*Hughes*: The Training College, Cambridge.

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*Educational Times*—

December, 1893.—*Findlay*: The Higher Training of Teachers.

May, 1894.—*Breul*: The Training of Teachers of Modern Foreign Languages.

February, 1896.—*Fitch, Hughes, Foster Watson, etc.*: Conference on Training of Secondary Teachers at the College of Preceptors.

Since the publication of the Report of the Royal Commission, constant discussions have been held and the proceedings printed. Among these the most important were:—

*Report of a Conference on Secondary Education* (Cambridge University Press, 1896; and

*Summary Report of Proceedings* of a Joint Committee on Teachers' Training (published at 37, Norfolk Street, Strand, W.C., price 3d., by the Incorporated Association of Headmasters). This report has been frequently quoted in the preceding pages. For the purposes of this Committee various papers were prepared as follows:—

*Findings of the Royal Commission* on the Training of Teachers for Secondary Schools, by W. Hardman. Reprinted from the *Educational Times*, February, 1897. (F. Hodgson, price 3d.)

*Papers on Secondary Training*, chiefly containing brief descriptions of what is being done in England and abroad. Published in *Education*, October 3, 10, 17, 24, November 7, 14, 21, 28, December 5, 26, 1896; January 13, March 20, May 15, 22, 29, 1897. (Whittaker and Co., price 1d. per number.)

*Regulations for Diploma Examinations*: Every British University now conducts an examination in Education, and particulars of these can be had on application at the office of the various Registrars.\* The College of Preceptors (Bloomsbury Square, W.C.) also conducts various Diploma Examinations for Teachers. These, together with the regulations for the issue of certificates for Primary Teachers under the Education Department and the Inspectors' Annual Reports, give a clear conception of the lines on which Education is studied at the present moment in Great Britain.

In connection with the training of Primary Teachers, the following Blue Book should be consulted:—

*Committee on Pupil Teachers* (Education Department, March, 1898). And arising therefrom *Adkins*, Training and Work of Elementary Teachers (*Journal of Education*, April, 1898).

\* To these should be added the prospectuses of the Training Colleges for Women Teachers (Cambridge, Cheltenham, St. George's, in Edinburgh; Maria Grey, Datchelor, St. Mary's, Paddington and the Catholic College, Cavendish Square, all in London).

## GERMANY.

There is, of course, a very large literature on this as on every other subject relating to education. English readers may consult—

*Stoy*: Paper at the Health Exhibition, Vol. XVI., London, 1884. (This volume also contains other papers and discussions on Training.)

*Findlay*: On the Registration and Training of Teachers in the Secondary Schools of Germany. Memorandum to Royal Commission on Secondary Education, Vol. V.

*Von Sallwirth*: The Vocation of Higher Teachers. (*Journal of Education*, October, 1890.)

The most active teachers who have advocated the study of Education in Germany are those who follow the leadership of Herbart. A list of some eighty papers by Herbartians on *Lehrer u. Lehrerbildung* will be found in *Rein's Encyclopædie der Pädagogik*, Art: *Herbart und die Herbartianer*. (Also printed and sold separately; see pages 84–86 in the reprint. Langensalza: Beyer u. Söhne, 1897.)

In the same Encyclopædie should be read—

*Rein*: Pädagogisches Universitäts-Seminar, which gives the history of attempts made to establish "Seminars" for the study of Education since 1780. References are also there given to some writers who do not follow Herbart.

*Aus dem pädag. Seminar zu Jena* (Heft. 3, Langensalza, Beyer v. Söhne, 1891), contains a valuable detailed account of the method of Professor Rein's Seminar.

*Paulsen*: Geschichte des gelehrten Unterrichts (2nd Edition, 2nd Volume, Leipzig, Voas, 1897) deals as ably with this as with all other problems of higher education.

*Muff*: Unser zweites Seminarjahr (Zeitschrift für das Gymnasialwesen, 1892, Berlin, Waidmann). This is one of many papers written since 1891 describing the results of the far-reaching reform instituted by Prussia in 1890, which established the *Gymnasialseminar* (see *Findlay* as above).

#### FRANCE.

*Marion* (Professor Henri): The study of Education at the Sorbonne (*Educational Review*, New York, February, 1894).

*Ward*: The Training of Teachers of Secondary Schools in France. (Report of Royal Commission on Secondary Education, Vol. V.)

*Williams* (Miss E.): Fontenay-aux-Roses. A French Training College (*Journal of Education*, June, 1892).

*Kirkman*: The Higher Training of Teachers in France (*Education*, November 28, December 5, 1896). See also a footnote giving other references.

#### SWEDEN.

*Twentyman*: Higher Training in Sweden (*Education*, December 26, 1896).

#### AMERICA—THE UNITED STATES.

The last ten years have witnessed a most rapid change in University opinion with reference to the study of Education. Very few of the large Universities are now without a Chair of Pedagogy: in some cases the work is shared by several professors. To this must be added the opportunities afforded by Teachers' Institutes and by Summer Meetings.

*The Annual Report*, by Dr. W. Harris, gives statistics as to all these, and usually contains articles on various topics written as contributions to the study of Education.

*The Pedagogical Seminary*, edited by President Stanley Hall (Worcester, Mass.), is a quarterly review consisting wholly of contributions of a scientific character relating to Education and to child psychology.

*The Educational Review*, edited by Professor N. M. Butler, of the Columbia University, also devotes special attention to the study of Education. An important series of articles, appearing between April, 1892, and September, 1894, gave an account of the varied methods adopted for the study of Education at Cornell, Leland Stanford, Michigan, Harvard, and the University of California. The same review has published many articles on the philosophic aspects of Education, e.g., *Royce* (Professor Josiah, of Harvard): Is there a Science of Education? (*Educational Review*, January and February, 1891).

*Columbia University, New York*.—*The Calendar of the Teachers' College* and the Horace Mann School attached to this University describes the most completely equipped institution which has so far been established for the study of Education.

*The School of Pedagogy* (a Graduate School in the University of the City of New York) also presents features of interest.

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## CANADA.

*Provincial Schools of Pedagogy, Ontario.*—Departmental regulations relating to the Training of High School Teachers (Education Department, Toronto, published annually). The province of Ontario conducts a strict system of training for University graduates directly under the control of the Minister of Education. See also

*Miller*: Education in Ontario (Education Department, Toronto, 1894).

*G. Stanley Hall and J. M. Mansfield*: A Bibliography of Education (D. C. Heath & Co., Boston, 1886), contains references to some sixty works, European and American, on the Education of Teachers (pp. 192-198). But many of the works referred to have only an historical interest.

*Monroe*: Bibliography of Education (Edward Arnold, 1897) gives an unassorted list of some fifty works in the English language (pp. 92-94).

For America, compare also Vol. V., Memoranda from United States and Canada, and Vol. VII., Report of Assistant Commissioner in United States and Canada, in the Report of the Royal Commission on Secondary Education; or the following:

*Bramwell and Hughes*' Report to Gilchrist Trustees on the training of Teachers in America (Sonnenschein, 1894).

## APPENDIX II.

*Note on the study of Education in the proposed new University of London.*

The imminence of legislation of a far-reaching character with reference to University Education in London\* suggests the appropriateness of considering whether opportunity should be taken by the teaching profession, and by educational authorities in London, to propose the establishment of a Faculty of Education side by side with the Faculties of Science, Medicine, and Law proposed in the Report of the Commissioners (1894), which served as a basis for the Bill now under discussion in the House of Commons.

The Commissioners foresaw the likelihood of development (p. xxxvi. of the Report), and pointed out that the establishment of Day Training Departments at University and King's Colleges suggested a beginning in this direction. They also observed that the Residential Training Colleges might take some share in such a movement, so far at least as their best students are concerned. They ignored, however, the circumstance that there were three well-established secondary Training Colleges for Women (the Maria Grey, the Datchelor, and the Department in Bedford College), and that the present University of London has for some years offered a Diploma in Education, which is, very happily, confined to graduates. Since the issue of this Report further developments have taken place. Two other secondary Training Colleges for Women have been established in London (St. Mary's College, Paddington, and the Catholic Training College, Cavendish Square), and the lecture work in Education which was commenced many years ago at the College of Preceptors has recently been enlarged into a Lecture and Training Department. This last is not completely equipped as a School of Education, but there is reason to suppose that when further financial aid is forthcoming this may form the nucleus of a larger scheme for Secondary Training.† It should further be noticed that London has been the centre of much of the activity in relation to Secondary Education witnessed since the Report of the Royal Commission. The University Extension Society has begun to provide courses of lectures on Education, the Winter Meeting for Teachers has been largely attended, several societies have been started for the pursuit of special branches of the Theory of Education—the Pestalozzi Society, the Child Study Association, the Childhood Society. Further, the library

\* London University Commission Bill, March, 1898.

† Evidence of Mr. Finches, Vol. II., p. 535, in Report of the Royal Commission on Secondary Education. See also "The Equipment of the Secondary Teacher . . . in London." (Memorandum to the Council of the College of Preceptors, 1896, to be obtained from the Secretary of the College.



equipment necessary for these studies is receiving more attention. The Education Library in Cannon Row is placed at the disposal of students by the Education Department; the library of the Teachers' Guild will shortly be extended as a memorial to the late Mr. Quick, whose valuable collection of pedagogic literature is now housed at 74, Gower Street; and the library of the College of Preceptors also renders service to students and teachers in London.

The fact that London contains so many schools of every type makes it certain that, in course of time, students of Education will gravitate to London, just as students of Medicine now do because of the hospitals. The chief difficulties in the way of development are the lack of registration for secondary teachers and the lack of means among intending teachers. Until the profession is organised by means of an official register, there is little inducement to undergo a complete course of post-graduate training, and the lack of means prevents all but a few from sacrificing the necessary time for post-graduate study. But the register is on its way, and the Local Authorities will certainly assist teachers, when the time comes, by the aid of scholarships.\*

It would seem, therefore, that, if the necessary financial aid were forthcoming, there will presently be a large supply of students desirous of equipment in the study of Education. And it should be noted that such students will not be confined to men and women who aim at work in the schools. There are a variety of administrative and semi-administrative posts connected with Education, for which these studies are coming to be regarded as a necessary equipment, such as Inspectorships of Schools, Secretaries to Boards and Committees, officials in central departments, and, of course, Lecturers on Education. The Commission† placed the study of Education in its administrative aspects under the Faculty of Law, but since the Report on Secondary Education it has become very clear that Education, like Economics and Politics, must be studied also in its own field.

If the arguments in the present essay which follow those of the Joint Training Committee's Resolutions be accepted, it will be seen that the demands of this new study will not be satisfied merely by providing Courses of Lectures in the University Department of Philosophy, but by the establishment of a separate Faculty, created by the co-operation of the teaching profession with University Professors of Psychology and Education, and in a subordinate degree with Professors in the Medical Faculty. The students in this Faculty would be post-graduates, that is to say, they would have completed their courses of study in Arts or Science before entering upon professional studies.

It is important to emphasise the necessity for this co-operation between the authorities of the University and the teachers, headmasters and head-mistresses in the schools. From what has been said in the body of this essay, it will be gathered that here, as in Germany, there prevails among practical teachers great distrust of the study of Education as conducted in Universities. This distrust can only be removed by inviting the teachers in London to take a responsible share in the establishment of a University Faculty for Education, similar to the share which is taken, as regards Law, by the Inns of Court and the Incorporated Law Society. It is perhaps more necessary to urge this point, because it has been neglected in more than one instance by English Universities which have during recent years established schemes for Diplomas in Education.

The resources of London offer an unequalled field both for research and for professional training in Education; and if we are right in believing that teachers are slowly coming to take an interest in these studies, it ought to be possible to make a beginning by the establishment of a Faculty of Education.

J. J. F.

\* The Middlesex County Council already gives Scholarships tenable at the Maria Grey College.

† "Laws regulating Institutions, such as School Boards" . . . (p. xliii. of Report as above).

## THE TRAINING OF SECONDARY TEACHERS AND EDUCATIONAL IDEALS.

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The advocates of the professional training of secondary teachers have generally rested their argument on practical grounds. They have maintained its absolute necessity in the interests of skilled and systematic teaching, and they have held consistently that the teaching of untrained men can never, either in method or in result, approach the highest possible level. Nor is it surprising that this aspect of the question should have first suggested itself; for the need of practical reform is urgent and obvious. But it would be a mistake if the supporters of training in pressing their views upon the public, and in formulating schemes for the realisation of their views, should look only to immediate practical needs. There is another side to the question; there are other aims beyond efficient class teaching which professional training if approached in the right spirit, ought materially to assist in carrying out.

The history of English education has been too much the history of individual effort and of isolated reform. Particular schools or schoolmasters have taken up one side or another of school life, have introduced this or that improvement, and have sometimes, on the special lines in question, given an impetus to the schools of the country at large. In this way Thring, Arnold, Butler of Shrewsbury, each in his own way set his mark upon his generation, and gave an impulse to English education which has never died away. In the present day, if we look down the agenda paper of any of the numerous Conferences which mark the succession of the months from January to December, we shall find that the educational world is busy with the discussion of details of all kinds, large and small; with Latin verses, school Volunteer Corps, entrance scholarships to the Public Schools or to the Universities, delimitation, departmental control, and a host of other questions the importance of which is undeniable; but it is strange that amidst so much activity we seldom find any suggestion of the wider and deeper questions which are not merely important, but vital and fundamental; questions which must receive an answer of some kind before the incessant activity with regard to details can produce any lasting fruit.

These questions in the sphere of education are precisely similar to those which must arise in every other department of national life, in the sphere of law, of medicine, of trade, of national



defence. They are the simple and fundamental questions of aims or ideals, and of means. It is the duty of the leaders of every profession not merely to act but to think for the nation; to tell it what ought to be its aims, and what are the means necessary for carrying them out. It is the duty, for instance, of those who are responsible for national defence to tell the nation what adequate defence means; what the needs of the Empire are; what is the task which the defensive services are called upon to perform. It is their duty to tell the country with unflinching veracity what means are necessary for the realisation of these ends, and to use every effort in their power to secure that the necessary means be provided.

Every nation must depend upon experts for knowledge and for guidance on the great questions of national life; the more democratic the government the greater the need for guidance; for where the people themselves ultimately control national policy, it is of the first importance that all should have some knowledge at least of the principles and even of the details of the great questions they are called upon to decide. And for this reason an immense weight of responsibility rests upon the shoulders of the leaders, the skilled experts in every department. They are bound not merely to see and think clearly, but to press their views upon the nation, which must ultimately decide; and to stake professional existence on getting their convictions at the least adequately considered.

It would be difficult to maintain that English schoolmasters have in this respect done their duty by the nation. They have done much good work, but they have failed in the primary duty of thinking out fundamental questions and pressing them upon the country.

There is little trace in the lives of even our greatest schoolmasters of any consciousness that such questions need consideration. In intellectual ability and force of character our great schoolmasters will bear comparison with the leaders of any profession; but for want of the scientific spirit, and of any comprehensive and systematic study of the theory and methods of education, they have been too often but brilliant amateurs. This, I expect, is in part the secret of the astonishing argument so often brought against training, that it destroys originality and tends to produce a dull adherence to a narrow groove. Our best schoolmasters have been conspicuous for freshness, force, originality, and they have been untrained; therefore let us avoid training, or we shall lack originality, freshness, force!

It will be worth while to examine for a moment in this light one or two of the great names of this century. Few schoolmasters have given a greater stimulus to English education than Butler of Shrewsbury. We hardly know whether most to admire his astonishing capacity for work, his unquestioning belief in his aims, or his power of communicating enthusiasm and of creating scholars out of almost any material. Not merely did he raise a local grammar school to the front rank of English public schools, but by the stimulus which he communicated to his own boys he aroused all the public schools of the country,



and made his influence felt even in the Universities themselves. A great scholar, a great teacher, he assuredly was; but a great educator? What were his educational ideals? What was the object of all his enormous energy? To what end did he direct the boundless intellectual enthusiasm he inspired? So far as we can answer the question we have to confess that he had apparently no ideal, except to get the greatest possible number of scholarships at the Universities. We cannot see that he had, properly speaking, any ideal of his own. He took without question the ordinary aims of the schools of his time, and pursued them with astonishing vigour and success, but of the meaning and significance of these aims, of their relation to life and to the national life he had apparently no conception. Such questions seem never to have occurred to him. The intellectual energies of the Public Schools were at that time concentrated almost exclusively upon classical scholarship, and this aim Butler adopted as his own with no apparent consciousness that there could be any other worth pursuing. No doubt he had the profoundest belief in classical learning. He would unquestionably, if challenged, have marshalled, with the overwhelming completeness and force which characterised his treatment of every subject, all that can be said—and justly said—in favour of classical education. No one knew better than he the stern intellectual stuff of which the scholar is made—the noble discipline to which his finely-tempered spirit must be subjected. But this is not enough. It is not enough to show that a particular scheme of education has great merit. The comparative method is here the essence of sound thinking. If we wish to show that a particular scheme is the best, we must show that it surpasses all others; above all, that it is in strict conformity with the ideal fixed for us, on the one hand by the nature and constitution of the human mind; on the other by the conditions of national character and circumstance. There is nothing whatever to suggest that Butler ever subjected his ideal to such a critical test. Nor was it within the range of his vision to discern in a classical training a high literary and æsthetic accomplishment. It is curious to find his great pupil and successor, Kennedy, writing to him for sympathy after the rejection of a Shrewsbury boy for a scholarship at Balliol “because, forsooth, his English essay was not good enough for them!”

A greater name in all respects is that of Arnold; and to him it is impossible to lay the charge that he had no clear ideal, no consciousness of education in its relation to national life. Arnold came from Oxford, Butler from Cambridge, and it may be pardonable to suggest that to this was due, in some degree, the wider range and deeper insight of the former. It is due to Oxford to say that she at least in the matter of philosophy has not left her children desolate. Those who quit her green pastures and her still waters, carrying with them all that she has to give, cannot entirely lack what she has always held to be the crown and coping stone of knowledge. To look for truth in the ideal rather than in the actual, to recognise the true nature of a thing only in its perfect development, were lessons that Arnold

learned at Oxford. These principles formed the intellectual basis of his life, and it is by them that his conception of the ideal school society and of the relation of master to boy are inspired.

We may go further than this and admit that in a sense Arnold was above and beyond criticism. "Now consider what a religious education in the true sense of the word is; it is no other than a training our children to life eternal; no other than the fashioning all the parts of our nature for the very ends which God designed for them; the teaching our understandings to know the highest truth; the teaching our affections to love the highest good." This, says Arnold, is religious education; but to Arnold education and religious education were the same thing. He who has discerned the truth expressed in these noble words has little left to learn; the root of the matter is in him; and if he can translate his belief into action it will be hard for the arrows of criticism to find a mark. Arnold's life was charged throughout with the spirit of this utterance. Through failure and disappointment, sometimes even, as it seemed, in defeat, he never allowed his eyes to rest upon any lower ideal, and it is this that made him not merely a great schoolmaster, but a prophet among schoolmasters, and that has made his influence an imperishable thing. Of no man can it more truly be said that his work abides, his spirit lives. At no time has he been so great an inspiration as to-day; and if we remember this as we turn again and again to the record of his life for new light and guidance, we become half reconciled to, can almost understand, what seems at first the cruel immaturity of his death.

But Arnold's very greatness gives point to the contention that we cannot afford to dispense with the minor but necessary aid of a true professional training. It is possible to discern even in him deficiencies and mistakes, and those precisely of the kind which a preliminary study of professional problems might have obviated. It is inevitable that something of the empiricist should cleave to any man who plunges at once into practice.

It is impossible to deny that Arnold took little account of certain important aspects of human nature and of some important departments of study. "He was not a philosophical reformer of Education . . . neither did his mind travel habitually over a wide field of interests . . . we can trace little or no direct influence of the fine arts or of physical science . . . -the actual reforms or new ideas which he impressed on school-life are chiefly those suggested by his own moral earnestness and religious enthusiasm, and they have special reference to the formation of character and conduct of life, rather than the attainment of knowledge. And even in regard to those aspects of Education he does not seem to have given special attention to the subjects of environment or the conditions of daily life. Thus in two of the most fundamental of all the practical questions concerning school education—the relative merits of the day-school and the boarding-school, and the best construction and arrangement of boarding-houses with reference to really wholesome conditions for boarding-school life—we do not gain much assistance from him."

It is impossible, I think, to dissent from these criticisms, which



are the words of one who is not the least distinguished of Arnold's successors. The Life remains; in its devotion and its lofty ideals an imperishable inspiration. The actual work, in Arnold as in some other men, cannot but seem strangely inadequate and disproportionate to the inherent greatness of the man; and the feeling is hardly lessened as we read "Tom Brown," which, as Mr. Findlay reminds us, must be taken as the complement of and commentary on the life by Stanley. It seems strange indeed that to Arnold, with such an ideal in his mind, the contrast of the actual should not have suggested that there were defects in the system which no attempt to infuse into it a new spirit could wholly meet; strange that he should have accepted, as apparently he did, the "Public School" of the 'Forties as the only alternative to private tuition; and that with so many dismal failures before him he should have considered "classics" pure and simple as the necessary staple of all liberal education.

It is difficult to estimate how much of this was due to temperament, to the almost sombre intensity of his moral earnestness and to his apparent want of humour, to the very loftiness which perhaps separated him by too wide an interval from average boy nature; how much to the fact that his work lay in the second, not in the fourth quarter of the century. All these causes doubtless had their influence; but it may fairly be argued that he must have discerned and solved problems which he did not discern, and have subjected to a criticism as searching as it would have been fruitful systems and institutions which he apparently accepted as inevitable had he been compelled to study the theory of education before practising it, to reflect upon problems before he was called upon to meet them, and to bring not only all methods but all systems to the test of a philosophic ideal.

It is an ungracious task to criticise and appear to decry great names. The dwarf who owes his wider prospect to his seat upon the shoulders of the giant should be slow to criticise the giant's inferior range; but it is allowable to show how, even the most vigorous and original minds were cramped inevitably by this want of a distinctively educational training and by their ignorance of those branches of knowledge which teachers are most specially bound to make their own.

What might not men like Arnold and Butler have done for English Education had they possessed the knowledge and the training necessary for a critical and scientific survey of the whole field of education, for the evolution of a true ideal, which would have been fruitful in true forms? We owe them, indeed, many admirable reforms. Each in his own way brought about an educational revolution in the public schools, but neither of them realised, still less attempted to solve, the problems which lie at the root of national education.

The present generation will, in all probability, see the settlement of English Education on lines which will endure for many years. Now, if ever, is the time for thought about fundamentals, to ask ourselves what we are aiming at, what we really want, what the nation wants, and what it ought to get. Schoolmasters in their various associations are ready enough with their advice



to the political powers. Are they equally ready with their own part of the work? Have they thought out the general lines or the details of the English Education of the future? The cry is for money and for organisation, and it need not be questioned that both are required; but it is "intellectual organisation" that we most need—a thorough thinking out of fundamental problems in a broad and philosophic spirit.

We have to ask ourselves—What is the true ideal of education? what is education itself? what is the nature of the human mind? what will be the natural development of a mind which from birth to maturity is under the most favourable conditions? what part in this development ought the education of the school to play? how far can the school supply these most favourable conditions, the presence of which is of such incalculable importance?

Some such general conception of the function of education is an indispensable basis if we are to attack successfully the more concrete problem, and to answer the question What is the best education for Englishmen? for the English upper, middle, and lower classes; for the English merchant, soldier, civil servant, doctor, shopkeeper, artisan? Are the citizens of a world-wide empire to be educated on the same lines as those of a small principality or of a land whose interests are bounded by its own domestic frontiers? Are all Englishmen of the upper and middle classes to be educated in the same subjects and by the same methods? Are there to be one or two or many types of Secondary Schools?

These are the practical questions which at the present day demand solution, and they can never be answered satisfactorily until we have a race of schoolmasters equipped for systematic thinking, who have the knowledge and the trained capacity for ordered thought on education. Reforms have been neither few nor rare, but they have been haphazard and based upon the needs of the moment. The great want of the age is not so much reform in detail as a new spirit. We want an education which shall be truly modern, which shall really be adapted to the needs of the age; an education based upon a clear view of all the available facts. These facts will include, first and foremost, the "life that is to be led" by Englishmen of various classes, and the number of years that they have to spend in education. They will equally include the past history of education in this country—English practice and traditions; for in aiming at the better, we must not lose our hold upon the good. Above all, among "facts" will come the facts of psychology and philosophy—the observed phenomena of the human mind. To the demand for a "modern" education schoolmasters have offered little but the "modern side," to often an unreasoned compromise between utility and tradition. Nothing could be more characteristic of English education. A modern side is not necessarily more modern, in the true sense of the word, than its rival. It is typical of English reforms which have so often been forced upon an unwilling profession by an uninformed but irresistible demand from outside, but have seldom sprung from an intelligent conception of the end in view.

It will not be sufficient if the schoolmaster of the future differs from the schoolmaster of the past merely in being a little less ignorant of the principles which underlie his trade, of the nature and growth of the mind which he undertakes to develop, and of the history of educational effort in former times and in other lands. We must not stop half-way; we must know all that is to be known. Knowledge is but one part of the schoolmaster's necessary equipment, but all the help that knowledge can give must be at his command.

The results of the absence of any systematic survey of the problem in this country are easily seen. In the schools of a nation, which is before all things free and self-governing, and which has in its turn to govern a large portion of the world, the systematic study of politics, of the principles and practice of government, has been till recently unknown, and is even now rare; the most important of all studies for an Englishman has been neglected or left to chance. Again we are a great commercial nation; upon our commerce the whole fabric of our national life is raised. Yet we are only just beginning to consider what "commercial" education means, and the British merchant is probably at the present moment, with a view to his professional life, the worst educated man in the world. The study of natural science has forced its way into our schools mainly because it is vaguely felt to possess a high utilitarian value; its place as an instrument of mental development is only now beginning to be recognised; and thousands of boys still pass through our schools without having devoted to this subject one single hour. Perhaps the most curious estimate of the value of the new learning is implied in the following advice which was given by a respected member of the staff of one of the most venerable of our Public Schools to a boy who had studied science with vigour and success for a couple of terms. "You have got on so well with your science that it will be unnecessary for you to go on with it any longer; you had better drop it, and give more time to your classics."

As the relative importance and the proper place of particular subjects has never been satisfactorily thought out, so the different kinds and types of education have been only very imperfectly defined. The most striking instance of this deficiency may be seen in the history of the word "technical," and of the education to which this name has been applied. It would appear a simple matter to define the point where the general cultivation of the mind stops and the special preparation for the particular trade or profession begins, and to denote each of these stages of education by an appropriate name. Yet in practice the word technical instead of being reserved for the latter has been authoritatively applied to the whole of the former unless it happens to include Greek; while to denote the education which should properly be called "technical," it has been necessary to press into service and to misuse the word "technological," which of course has a perfectly distinct meaning of its own.

The predominance in English education of mere gymnastic, of the merely formal exercise of the intelligence to the neglect of the imaginative, creative power, is another mistake which



would have been impossible had our schoolmasters possessed a clear knowledge of psychology and been trained to apply it at every step to the practice of education.

I have assumed throughout this paper that the true end of education is the "life to be lived," and of this life the professional occupation—the true social function—is surely the largest part. It has been said that the aim of education should rather be to give refined tastes and to provide for a well-spent leisure, but it can hardly be that education has no reference, or only minor reference, to the greater part of life. Amusement and recreation stand to sound and liberal education in much the same relation as works to faith in the Pauline theology. Refined recreations are a sure mark of an educated nature, but in themselves they are rather the flower than the root. They are not the chief end of education, but one of its manifold rewards.

Of course, it is an axiom that no subject should find a place in a school curriculum unless it is capable of giving a sound intellectual training, as well as information; unless it is educational in the sense that the study of it can be made to conduce to the main end of all education—a cultivated intelligence; but the mental discipline derived from a particular study depends much more upon the methods and spirit of the teaching than upon the special subject selected. And it may be questioned whether mere discipline does not bulk far too largely in English education, and whether its lack of "actuality," its aloofness from the life of the nation, has not been due in great part to this characteristic. "It will be of no use to me afterwards" is not entirely an unintelligent grumble. It ought to be possible to make all but the least intelligent boys feel the relation of their education to after life, its genuine use, if it is really adapted to that end; and mental discipline may be gained as well in subjects which have this vital connection as in others, if, indeed, the best discipline is to be gained from those others at all. The rather silly paradox about the uselessness of all true knowledge is but another instance of the want of clear thinking.

In trying to show the want of systematic thinking in English secondary education I have turned instinctively for illustration to teaching rather than to education in the widest sense; and this for the reason that teaching is the weakest side in English schools. The ideas of Arnold and of others as to the formation of character and the conduct of life have borne excellent fruit, and the best schoolmasters are fully alive to problems of which an earlier generation seems to have had no conception; but it may be doubted whether the ordinary teaching of the class-rooms has undergone any great improvement, except perhaps that the same degree of indiscipline would hardly now be tolerated. But if the English schoolmaster is now fully alive to the importance of moral training he does not always fully realise the magnitude of the problem or the extent of his power. How seldom, for instance, is the class-room influence upon character fully realised or developed. The whole moral demeanour of a



boy is often changed for better or for worse by getting into a particular form. Under one who is really a "master" his whole nature may be raised: faults slink ashamed into the background, unexpected virtues arise and grow, though no single word of direct moral teaching may be uttered. How often is it noticed that a boy will cheat one master without compunction, while he will shrink with unimaginable shame from the thought of cheating another? A boy spends many hours daily in the class-room; he is all the time inhaling a subtle moral influence from the character of the master and from the moral atmosphere which he creates about him. But how little is this recognised! How long does it take a young master to realise that teaching has its moral as well as its intellectual responsibilities! How seldom is this important truth impressed upon him at the outset of his career! A weak housemaster is a recognised danger; but the influence of the class-rooms is often strangely undervalued. I have heard men of standing and experience and of undoubted moral earnestness gravely deplore that a housemaster should have to "fritter away" his moral influence by the inevitable annoyances of form management. No one who has studied the nature of teaching in its essence could countenance so false and shallow a view: no school of training however rudimentary could fail to point out so simple an error. The English schoolmaster's ideas on moral training are sound and healthy enough as far as they go, but they lack insight and breadth; like his notions of teaching they are haphazard and amateurish, based upon no measured study of the problems and conditions under which he works.

The same criticisms must be passed upon the physical training of our schools. Here again we follow instinct rather than reason. The Englishman is a lover of sport and of the open air; town life will never seem to him anything but unnatural, intolerable except from necessity. In our schools we try to reproduce the conditions of country life, to be as much as we can in the open air engaged in some form of exercise which implies competition. This, of course, is excellent; nothing could make up for the absence of free muscular action in the open air, for the healthy stimulus of hearty games. But the unscientific character of our education is seen on the one hand in the growth of "athleticism," and on the other in the absence of all provision for physical exercise in many schools. There would appear to be no reasoned conviction as to the place which games ought to hold in the life of a school. In one they threaten to absorb nearly the whole effective energies of both boys and masters; in another they exist without encouragement or regulation, or may not exist at all. Again, to physical training, apart from sports, scant attention is paid. Deft and subtle fingers obedient to the will and acting in ready harmony with the eye should be as necessary an object of physical training as a well developed biceps and individual peculiarities or defects of physique require special study and treatment. But these are truths which our schools as a rule have yet to learn.

There is, in a word, whether we look at English education in

its various separate aspects, intellectual, physical, moral, or whether we consider our secondary system as a whole and the various types of school which it includes, no clear conception of ends, and no careful calculation of appropriate means. Haphazardness has been the mark of the system, just as amateurishness has been the mark of the individual. It has been left to chance whether there shall or shall not be a secondary school in any particular town, and the character and curriculum of those which exist have depended far too much upon the principles or the prejudices of the individual headmaster.

The cure for these defects does not lie entirely with the schoolmaster. But upon him must rest at least a large part of the responsibility. He fails in his duty to the nation he serves if he does not in the first place equip himself to the very best of his ability with the knowledge and experience which alone can enable him to think out urgent problems, and to give, as an expert, sound and clear advice. It is from this point of view that the training of teachers may seem almost to transcend in importance all other educational questions. With it is bound up the solution of many problems. It is the first and most necessary step in the scientific treatment of education in this country. When once the power and the habit of scientific treatment is gained many of the present difficulties will disappear of themselves; there are few that could not be disposed of by a little educational sincerity and skill.

The existing schemes for the training of teachers appear admirable as far as they go, and should quickly bring about a revolution in our class-rooms. They will exclude the absolute novice; they will exclude utter incompetence; they promise to give us a class of enthusiastic and ambitious young teachers who will be animated with a strong feeling of professional pride, and who will refuse to be satisfied with anything but the best of which they are capable; men who are not likely to mistake ignorance and crudity for originality and freedom, who will have the courage to believe that the "best" results are inseparable from the best methods. We shall get rid in time of the teacher who thinks teaching consists in asking questions out of a book, and who complains that he "has not time" to teach well. But there is at present little provision for men who wish to do more than qualify themselves as practical teachers, and who would like to make a special study of education. For these something in the form of an honour course would seem necessary, and it is to these that we must look for the "thinking out" which is so urgently needed in every department of education. The suggestion of the Joint Committee on the Training of Secondary Teachers that higher degrees in the Philosophy of Education (corresponding to the degrees of B.C.L. and D.C.L.) should be instituted at the Universities cannot be too warmly welcomed, provided that the studies for these degrees are entirely postgraduate. The strong point of English masters at the present moment is their comparatively high intellectual equipment, and this must be maintained at all costs. For the moment the need of Philosophy is even more urgent than that of intelli-

gent practice, and the one will bring the other in its train. The men would be forthcoming if the need of them were felt. If a prolonged honour course such as this were recognised as an additional qualification whether for assistant-masterships or headmasterships men would not grudge one or even two years of additional study, and they would still be spending upon their professional qualification no more time than is often given by those who aspire to be the leaders of the other learned professions.

If training, in addition to its more obvious work, can give us a class of honour men like these, we may hope in the end to see education in the hands of a class of thoroughly competent general officers, of men who are versed in the theory as well as in the practice of their profession, who will possess the knowledge and the faith to work out a worthy national ideal. We of the present generation can perhaps do little. But we can, at least, smooth the way for a younger and stronger generation, who may perhaps achieve what we can but dimly suggest.

F. J. R. HENDY.

Grammar School, Carlisle, August, 1898.

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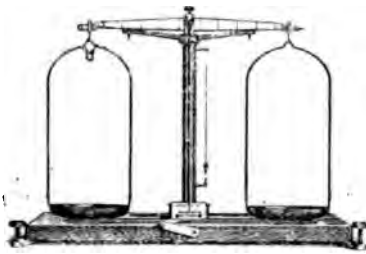


THE HEURISTIC METHOD OF TEACHING  
OR  
THE ART OF MAKING CHILDREN DISCOVER  
THINGS FOR THEMSELVES.

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A CHAPTER IN THE HISTORY OF ENGLISH SCHOOLS.

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"New times demand new measures and new men ;  
The world advances, and in time outgrows  
The laws that in our fathers' days were best ;  
And, doubtless, after us some purer scheme  
Will be shaped out by wiser men than we,  
Made wiser by the steady growth of truth."

"Our time is one that calls for earnest deeds."

(LOWELL.)

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All who seriously study the history of education in our times must agree that, although it may be long ere we can cry *Eureka!* *Eureka!* of an ideally perfect system, recent experience justifies the assertion that we shall hasten the advent of that desirable time if we seek to minimise the didactic and encourage heuristic teaching; for the progress made of late, which is very considerable, is unquestionably due to the introduction of heuristic methods and exercises.

But many will ask—What are heuristic methods? Even the word is strange to us! they will add.

True, it is not yet in the dictionary; but it is scarcely possible to doubt that it is come to stay, and will—nay, must—soon be there; indeed, its introduction as the watchword of a party seems really to meet a want, judging from communications I have received with reference to my paper on *Heuristic Teaching in Physical Science*, read at the International Conference on Technical Education, at the Society of Arts, in June 1897.

I first came across it in an eminently suggestive paper by Professor Meiklejohn, one of the most valuable by far of those

read at the International Conference on Education held in connexion with the Health Exhibition at South Kensington in 1884.

Heuristic methods of teaching are methods which involve our placing students as far as possible in the attitude of the discoverer—methods which involve their *finding out*, instead of being merely told about things. It should not be necessary to justify such a policy in education. Unfortunately, however, our conceptions are blunted by early training, or rather by want of training. Few realise that neither is discovery limited to those who explore Dark Continents or Polar Regions, nor to those who seek to unravel the wonders of Nature; that invention is not confined to those who take out patents for new devices; but that, on the contrary, discovery and invention are divine prerogatives, in some degree granted to all, meet for daily usage, and that it is consequently of importance that we be taught the rules of the game of discovery and learn to play it skilfully. The value of mere knowledge is immensely over-rated, and its possession over-praised and over-rewarded; action, although appreciated when its effects are noted, is treated as the outcome of innate faculties, and the extent to which it can be developed by teaching scarcely considered.

Professor Meiklejohn, in the paper referred to, contends that the permanent and universal condition of all *method* in education is that it be heuristic: and goes on to say:—

This view has its historic side; and it will be found that the best way, the truest method, that the individual can follow is the path of research that has been taken and followed by whole races in past times. This has, perhaps, been best put by Edmund Burke, probably the greatest constructive thinker that ever lived in this country. He says: "I am convinced that the method of teaching which approaches most nearly to the methods of investigation is incomparably the best; since not content with serving up a few barren and lifeless truths, it leads to the stock on which they grew: it tends to set the learner himself on the track of invention, and to direct him into those paths in which the author has made his own discoveries." It may be said, Professor Meiklejohn continues, that this statement is applicable to science and to science only. But I am prepared to show at the right time, that it is applicable to literature also, though not in the fullest extent and application of the method. The heuristic method is the *only* method to be applied in the pure sciences; it is the best method in the teaching of the applied sciences; and it is a method in the study of those great works of art in language by the greatest minds which go by the general name of literature.

It would be easy to support this contention by numerous other quotations, but one will suffice—than which, however, none could be more impressive or striking. I refer to the words used by Lessing: "If the Almighty were in the one hand to 'offer me Truth, and in the other the Search after Truth, I 'would humbly but firmly choose the Search after Truth'—words already cited by the Headmaster of University College, Mr. Eve, in advocating scholarly teaching of modern languages.

My own career has led me along lines entirely in harmony with the views expressed by Professor Meiklejohn—hence it is,

perhaps, that I am become so strenuous an advocate of the doctrine he supports.

I can clearly trace the development of my\* heuristic tendencies—which are certainly in a large measure innate, for my father was critical and enquiring—to one of my school books—absolutely the only interesting one that came into my hands—to a literary work, *Trench's Study of Words*; and can well recollect how this book at once fascinated me—and not me alone, but my father also, a commercial man, whose early training and career had been such as to leave him entirely unacquainted with subjects of the kind. I still vividly recall to mind how from this book, as a mere lad, I for the first time gained ideas as to the value of method—of what I should now call *scientific method*. It even taught me to appreciate Euclid, the deadly dullness of which subject long oppressed me, as it does probably almost every boy or girl at school, for there was no meaning apparent in it as it was presented: it seemed in no way to connect itself up with any experience I had gained; but somehow, after reading Trench, the scales suddenly fell from my eyes, its logical character at least became evident, and it was no longer so difficult to understand or to master—but I cannot say that it ever became interesting or its use obvious. This experience has haunted me through life, and has often led me to think how much I might have learned at school had I been properly taught or even provided with a few books giving insight into method, like Trench's; I owe to it more than to anything else the growth of a desire to promote the teaching of method.

As a student of science I was equally perverse. I had every desire to learn, but didactic teaching seemed always to produce a sense of irritation. Practical work was intensely interesting, although it was only too often done in obedience to orders without the underlying philosophical motive being clear. The facts recited in the lecture room, especially when accompanied by experimental illustrations, frequently came as revelations, but, on the whole, listening to lectures produced little abiding effect, one image following the other too quickly. Text books I always found unattractive and unsatisfying—often nauseating, for I felt that I wanted to become a chemical cook myself, not merely to know what the dishes were made of and what they looked like on the table; however, I got through them and the measles lightly, without any serious disturbance of mental balance such as a hard fate, and unreflecting educators, impose on most students who are forced, by the pressure of examinations, to unduly indulge in food so indigestible and unpalatable. Happily the proper corrective was soon discovered: for, being an omnivorous reader, it was my good fortune, at an early stage, to have my attention called to original

\* Unfortunately, as I am sketching the history of a movement in which I have perforce taken a leading part, it will be difficult to avoid an egotistical form of statement—would that it were otherwise. For had more of those whose duty it is to work in such a field taken their fair share of the labour, there would not only have been no excuse for me to obtrude myself, but the many necessary reforms would long ere this have been introduced into our system of teaching.



literature. Needless to say, this proved to be intensely interesting, as glimpses of method were soon gained from it. Full emancipation came later—the haven being reached when I passed from the mainly didactic surroundings of an English laboratory into the heuristic atmosphere of a German university. I seemed to escape into an Elysium.

Nevertheless, in the course of years, I had been insensibly compelled to swallow much poison, and this had its inevitable effect. Impressed habits and convictions were not easily cast aside; so that, when I started my career as a teacher, although I saw much reason to be dissatisfied with existing practices, it was only very gradually that I could divest myself of conventional articles of belief, or make up my mind what changes were necessary and feasible. Therefore I can always fully sympathise with teachers whose convictions have been forced upon them—whose peace of mind was until recently undisturbed. It is easy to understand that it will be very difficult for them to enter fully into the spirit of the heuristic doctrines that are now being widely preached, and still more so for them to apply methods which they have never previously been trained to understand.

My opportunity first came when I was appointed to take charge of the chemical classes established at Finsbury by the City and Guilds of London Institute for the Advancement of Technical Education.

It was clear from the outset that technical education was a superstructure that could only be safely erected on a solid foundation, and it was equally manifest that such a foundation was nowhere sufficiently laid. I early came to the conclusion which, I believe, is now common to all who are competent to speak on such a matter, that until our school system had been entirely reorganised the forces of higher education could not be properly brought into action, and consequently felt it to be my duty to labour at the groundwork.

The experience gained in the course of four years in conducting classes at Finsbury led me in 1884 to state my views publicly in a paper on the teaching of natural science as a part of the ordinary school course, and on the method of teaching science in the introductory course in science classes, schools and colleges—a paper which was read at the Health Exhibition Conference already referred to.

*Universal practical teaching of the elements of natural science*, not merely of some one branch, was advocated, on the ground that it tends to develop a side of the human intellect which is left uncultivated by the most careful literary and mathematical training—the faculty of observing and of reasoning from observation and experiments. The instruction was to comprise the elements of the science of daily life in so far as is essential to the understanding of the ordinary operations and objects of Nature, and was to be from beginning to end of as practical a character as possible, such as would develop the faculties of observing, comparing, and reasoning from observation.

The essential feature in the chemistry scheme was that students were to be set to work *to solve problems* experimentally. They were not merely to be told: "This is the case—satisfy yourself that it is by repeating the following experiment." Moreover, quantitative exercises were introduced at the outset, and were insisted on as all-important. Lastly, the instruction was not confined to non-metallic elements, but metals in common use and organic substances consumed as foods were also to be studied; oxides of nitrogen and other *objets de luxe*, which in no way concern our daily life, being relegated to the repertory of the professional chemist.

Meanwhile, many others were also fully aware of the unsatisfactory character of the system of teaching science in vogue, and were seeking to improve the methods. One result of this activity was that in 1887 a committee was appointed by the British Association for the purpose of enquiring into and reporting on the methods of teaching chemistry in schools. The members of the Committee were Mr. J. T. Dunn, Professor Dunstan (Secretary), Dr. Gladstone, Mr. Vernon Harcourt, Mr. F. Jones, Professor McLeod, Professor Meldola, Mr. Pattison Muir, Dr. Russel, Mr. Shenstone, Professor Smithells, Mr. Stallard, and myself—all men who were either directly concerned with the teaching of science in important schools or chemists by profession.

In 1888, at the Bath meeting, this Committee presented a report in which an account was given of replies received to a letter addressed to the headmasters of schools in which chemistry was taught. This report is full of instructive reading. In referring to the replies received to the question—*Which methods, in your opinion, are most likely to render the teaching effective as a mental discipline, and as a preparation for subsequent instruction in the higher branches of the science or in applied chemistry?* the Committee remark:—

It is clear that the older plans of teaching, which are still largely used, are felt to be partly unsatisfactory, and that by modifying them chemistry might be made much more valuable as a mental discipline for boys. In particular, protest is made against the undue proportion of time which is frequently assigned to qualitative analysis; indeed, the majority of teachers do not consider this to be the most valuable part of the subject. Others hold that it presents many advantages, and is, on the whole, the best adapted to school work, especially when instruction has to be given to large classes of boys. But while most teachers strongly deprecate a rigid adherence to the present system, and a few are able to point out the general lines on which the teaching might be more usefully conducted, it is evident that very few, if any, have yet put into operation a remodelled system of instruction. In fact, it appears that teachers stand very much in need of advice and assistance in preparing a modified scheme of teaching suitable for general adoption in schools. It has several times been suggested that this Committee might be able to render important help in this direction.

The final paragraph also of the report is now historically interesting:—

The Committee feel that these reports have put them in possession of the actual facts connected with the teaching of chemistry in schools, and

have made it clear that something should be done in the direction of promoting a more uniform and satisfactory treatment of the subject. The Committee think that some suggestions might now be made as to the method of teaching chemistry which should be followed in schools. If this can be done, it will certainly confer a great benefit on both teachers and examiners, and will be likely to lead to a more emphatic recognition of the merits of the science as an instrument of elementary education.

Further reports were presented in the two following years, 1889 and 1890, and the Committee did me the honour to include in these two series of *Suggestions for a Course of Elementary Instruction in Physical Science*. In principle, these suggestions were the same as those put forward in the paper read in 1884, but they mark a great development of the scheme, which had meanwhile assumed a more consistently logical form.

If any proof were needed that criticism to be effective must be constructive, the success achieved through the British Association Reports would afford all that was wanted. There is no doubt that the recommendations of the Committee have been of the greatest service in promoting the introduction of heuristic methods of teaching experimental science into schools.

It is easy to preach or profess apparently sound doctrine in vague and flowing periods; to be fully seized with what Professor Meiklejohn humorously terms the afflatus of a crotchet; but, when practice takes the place of profession, it often turns out that the understanding arrived at was very imperfect. The issue of full details of a scheme was, therefore, a step of great importance. Moreover, whilst the reports have served to guide teachers, and have practically been their text-books, their pupils have enjoyed the inestimable advantage of working without a manual before their eyes to deaden their powers of perception and initiative. The reports, in fact, foreshadow the ideal elementary text-book of the future—one that will be consulted by students only after the knowledge is gained by actual observation.

It is important that the general principles should be understood by which the British Association Committee were guided in the acceptance of my scheme. The following paragraphs from their report are, therefore, quoted:—

The Committee are convinced that the high educational value of instruction in physical science has never been exhibited to its full advantage in most of our educational institutions. Nevertheless there exists already a considerable body of experience which proves that there is no more effective and attractive method of training the logical faculties than that which is afforded by a properly arranged course of instruction in physical science; by no other means are the powers of accurately ascertaining facts, and of drawing correct inferences from them, so surely developed as they are by the study of this subject.

It cannot be too strongly insisted that elementary physical science should be taught from the first as a branch of mental education, and not mainly as useful knowledge. It is a subject which, when taught with this object in view, is capable of developing mental qualities that are not aroused, and indeed are frequently deadened, by the exclusive study of languages, history, and mathematics. In order that the study of physical



science may effect this mental education, it is necessary that it should be employed to illustrate the scientific method in investigating nature, by means of observation, experiment and reasoning with the aid of hypothesis; the learners should be put in the attitude of discoverers, and should themselves be made to perform many of the experiments. The lessons ought to have reference to subjects which can be readily understood by children, and illustrations should be selected from objects and operations that are familiar to them in every-day life. Chemistry is particularly well-adapted for affording this kind of instruction, and the committee are of opinion that a course which is mainly chemical will be most useful in developing logical habits of thought.

Chemical inquiry involves however, the use of various physical processes, and these are themselves of great value from the point of view from which the instruction is being given. It is also of great importance that the learners should become acquainted with the characteristic instrument of physical science, viz., measurement, and therefore quantitative processes should be largely made use of.

Stress was laid also on the following points with regard to the manner in which the scheme should be carried out:—

In order that the plan shall produce its full educational effect, the instruction should be *commenced at an early age, and be extended to every child in the school*. They do not desire to bring forward physical science as a substitute for any of the other principal subjects of study, but they ask that like these subjects it should be looked upon everywhere as a necessary part of education, and that it should receive a due share of the time devoted to school work.

It will be necessary to allot more time to the subject, and to employ a greater number of teachers. A teacher should not be required to give practical instruction to more than from fifteen to twenty pupils at one time.

The Committee are aware that the course of instruction now suggested is not in conformity with the present requirements of examining bodies. Its general adoption must therefore depend on their co-operation.

Although the course indicated in the British Association scheme was one that had been found to work well in practice, I had not had sufficient opportunity of using it with young children, my experience having been chiefly gained from observing its effect on less plastic material, mostly lads who had left school without receiving any scientific instruction. But being a profound believer in the superior intelligence of young children, holding also the pessimistic view that school training as often mars as it makes the career of a child, I was from the outset persuaded that the system would prove most useful in schools, and be most applicable to them.

We are entitled already to claim, I believe, that this is now placed beyond question. On the appointment of Mr. Hugh Gordon, M.A., in January 1891, by the School Board for London, as their Science Demonstrator in the East London and Tower Hamlets Division—one of the four districts into which London is divided—work was commenced in a number of the schools under his charge, and was gradually extended by him, and subsequently by Mr. Mayhowe Heller, B.Sc., until in June, 1897, the British Association scheme was in operation in no fewer than 40 of the London Board Schools. The attack thus made on the outworks

of our English educational system was extraordinarily successful from the first, owing to the fortunate accident which led to the selection of capable commanding officers, and it is difficult to exaggerate the value of the service rendered by the two gentlemen named. Mr. Gordon, by his determination and energy, took the fortress by storm, cutting asunder the big, tangled ball of official red tape in dauntless fashion, and so captivating both the teachers and inspectors by his enthusiasm for the work as soon to make willing helpers of nearly all of them. A little shilling manual—"Elementary Course of Practical Science" (Macmillan and Co., 1893)—which he prepared for the guidance of teachers and others, was also of signal service. His successor, Mr. Heller, showed equal devotion to the work, and not only carried it on in the boys' schools, but succeeded in introducing it into several girls' schools; he paid special attention also to the scientific side of domestic economy, and may be said, indeed, to have given the first impetus to rational teaching of this all-important subject.

Miss Grace Heath—a teacher of the very greatest promise, whose premature death is deeply to be deplored—early obtained most promising results at the North London Collegiate School for Girls; where, in consequence, such work is gradually becoming regarded as of importance. But the most systematic trial given to the method in a girls' school has been that carried out at the Central Foundation School in Bishopsgate, London, by Miss Edna Walter, B.Sc. This lady has embodied her experiences in an interesting paper read at the Liverpool meeting of the British Association in 1896, which was afterwards printed in *Education*.

The co-operation of examining bodies—which the British Association Committee pointed out was so much needed—is also gradually being secured. The Association of Head-Masters in 1894 appointed a Major Scholarship Committee

To call together representatives of bodies interested in the award of Scholarships and Exhibitions offered by County Councils and similar bodies, which take the holders from Secondary Schools to places of higher education; and, if possible, to formulate a scheme of examination that may be acceptable both to schools and higher institutions.

The syllabus framed by this Committee, based on the British Association scheme, was taken into consideration, and further elaborated—especially the preliminary part dealing with simple physical measurements—by a Special Committee appointed in 1895 by the Head-Masters' Association, which meanwhile had acquired the dignity of an incorporated body. The amended syllabus prepared by this Committee was received and adopted by the headmasters at their general meeting in January 1896. It will be quoted in full later on. Following the plan adopted by the British Association Committee in publishing a detailed scheme of work, the Head-Masters' Committee happily took steps to make the syllabus they issued useful to teachers by giving ample indication of the kind

of work students should do in the form of suggestions of suitable experiments—thus setting examining bodies generally an example which was much needed. At the same time they made their position clear by pointing out that it was not intended that the teaching should be limited to the experiments described, and that it was hoped that the suggestions would be sufficient to indicate the lines on which the teaching should proceed and to assist teachers in inventing other experiments. A syllabus full of detail is naturally open to the theoretical objection that it may confine and stereotype teaching; but, on the other hand, so long as teachers need guidance—as the majority of those in schools do at present—it is of inestimable value in promoting sound teaching; for, however slavishly a syllabus be followed, if it be a sound one good results will be obtained by its use. As the schemes in use are excessively unsatisfactory in most cases, we may probably congratulate ourselves, however, that the conventional syllabus is, as a rule, brief and vague, and, therefore, does not greatly mislead if it render no assistance.

In 1895 steps were taken to invite a conference between the Local Examination Authorities at Oxford and Cambridge and the Head-Masters' Committee for the improvement of the methods of Science Teaching in Secondary Schools. Eventually the Oxford and Cambridge authorities agreed to introduce into their examination scheme a syllabus in accordance with that adopted by the Incorporated Association of Headmasters, which should, for the present, be alternative with that previously used, and it is evident, when the schedules they have issued are considered, that they have done their best to comply with the understanding arrived at. Unfortunately, however, their instructions in no way whatsoever imply or involve heuristic teaching; and it is only too clear that that which is fundamental in the recommendations of the British Association scheme has not been understood.

As early as 1893, the Education Department had introduced into the Evening Schools Continuation Code a syllabus prepared by Mr. Gordon, based on his experience in carrying out the British Association scheme, both in London schools and in evening classes which he held for the Surrey County Council. The syllabus was subsequently introduced into the Day Code as Course H of the Alternative Courses and also in a modified form, under the title Domestic Science, into Schedule IV. of the Day School for Girls. It now ranks as a specific subject for boys.

The Joint Scholarships Board—the outcome of the Major and Minor Scholarships Committees, appointed originally by the Incorporated Association of Headmasters, but now an independent and widely representative educational authority—in their various examinations make use of schemes which all involve the decision that elementary physical science shall be taught on the lines prescribed by the British Association Committee.



The subject of chemistry teaching in schools was taken into consideration in 1896 by a highly representative hybrid committee appointed by the Technical Education Board of the London County Council. The recommendations of this committee, embodied in their report presented to the Technical Education Board in January 1897, also in all respects endorsed the opinions of the British Association Committee. Great impetus has been given to the rational teaching of elementary science in the London district by the enlightened action taken by Dr. Garnett and Dr. Kimmins, on behalf of the Technical Education Board, in advocating practical work. In a recent course of lectures to teachers, at the winter meeting in London organised by the College of Preceptors, Dr. Kimmins gave most important testimony to the success achieved in schools using the headmasters' syllabus, and also earned the gratitude of teachers by the hints he gave on methods of carrying on the work.

Lastly, it may be mentioned that the authorities of the University of London have recently taken the all-important step of prescribing *General Elementary Science*—which includes the elements of chemistry, mechanics, and physics—as an obligatory subject at the Matriculation examination. But, unfortunately, the syllabus provided is a very unsatisfactory and old-fashioned one, and is scarcely calculated in any way to favourably influence the *methods* of teaching science in schools. It could not well be otherwise, however, as no one fully aware of the progress that has been made in schools of late years, with knowledge of the details of such work, appears to have been placed on the Committees concerned in drafting the syllabus; and almost any rational scheme is bound to be wrecked by a plethora of invertebrate opinion. This is the more to be regretted as there is little doubt that, whereas formerly teachers in schools were much behind the times, they are now considerably in advance of their professional brethren and should have been taken into their councils. Indeed, as a class, professional teachers of physical science are proving strangely conservative and apathetic students of method; at a time, too, when there is paramount need for activity, and infinite opportunity for its exercise. It is, perhaps, permissible to regard the fact that such is the case as conclusive evidence of the want of proper and especially of wide heuristic training, for it is evidently quite a mistake to assume that the profession of science now-a-days makes men truly and broadly scientific, however scientifically they may be able to carry on work in some narrow and highly specialised field of investigation.

For the benefit of literary friends who may here adventure the remark, "This is because you have had no proper literary training," let me say at once: It is nothing of the kind; it is simply because "science" is taught unscientifically—by literary methods in fact, without sufficient regard to its essentially heuristic character. Had the literary party had command of the methods we are seeking to introduce, they would long ere this have effected

the reforms we desire to bring about, the field having been in their possession for generations. ' Either this is true, or they are incompetent to understand and use the weapons at their disposal.

But there is no need for us to bicker about small matters, and there is no inherent antagonism between the views of our two schools when these are properly stated; the difficulties arising in practice are due to want of understanding and prejudice—I am bound to say, almost entirely on the literary side—when not to wanton disregard or blind ignorance. What is required now is that both parties should recognise that they have the same purpose in view, and that there must be a judicious fusion of interests.

Before discussing various points of detail, it will be well to call attention to the syllabus of the course of instruction in elementary science, based on the British Association scheme, which has been adopted by the Incorporated Association of Headmasters (Appendix A). The syllabus is prefaced, it will be noticed, with a number of explanatory remarks, which are of considerable importance and interest as showing the point of view from which the instruction should be given.

There are many points in connexion with the scheme of work embodied in this syllabus which may be dwelt on with advantage, especially on behalf of those unacquainted with such work and who desire to introduce the subject.

The question of attitude comes first. It is true the teaching of all subjects is now made infinitely more interesting than was formerly the case even in my school days, owing to great improvements in the books used, and also owing to the introduction of illustrations and demonstrations such as were formerly undreamt of; and at the same time teachers have been growing more and more consistently liberal in their views. Yet, with rare exceptions, the attitude of teacher to pupil remains the same—it is essentially didactic; the aphorism, "Knowledge is power," narrowly interpreted, is still the guiding principle. But this cannot any longer be permitted.

A great object lesson in the value of scientific forethought has recently been given to the world by Nansen. Earlier Arctic expeditions had been conducted by men equally brave—but none had previously sought, as he did, to prepare themselves for every contingency by early training, and by thinking out in advance all the conditions of the problem. Our educators are mostly in the condition of the old Arctic explorers: often brave, intelligent, and self-sacrificing as they were; keen to render service and to achieve distinction for their country; yet in a sense very old-fashioned as well as untrained. The time is now come when we can only work on Nansen lines: teachers must display wider knowledge, wider grasp of their subject, more forethought, more power of appreciating the conditions of the problem they are called on to solve, more willingness to advance, greater bravery in facing change, whatever trouble it may involve, higher conceptions of the moral duties of their calling.

It must from the outset and ever be remembered that the great object in view in education is to develop the power of initiative and in all respects to form the character of the pupil. The appreciation of this contention is crucial. "The pious Pestalozzi is filled with measureless remorse when he finds that he has given a little boy a conception, instead of inducing him to find it himself," remarks Professor Meiklejohn. So should every teacher be; and if the feeling expressed in this sentence can but be made to rankle in the mind of every teacher, the end is achieved. Schools will then become educating institutions; the didactic instruction which poisons our existence at the present day will be properly recognised as a fell disease.

It is necessary to insist on this over and over again, as even among those who are become advocates of heuristic training there is often incomplete recognition of the fundamental importance of observing such an attitude towards learners. The following passage, for example, occurs in the chapter headed "Physical Science" in Spencer's *Aims and Practice of Teaching Physical Science* (London, 1897, C. J. Clay and Sons), to which I have contributed the chapter on Chemistry.

A great deal has been written in favour of the Research attitude on the part of the learner. But despite the force of some of the arguments adduced, it may be doubted whether this attitude is the proper one for a beginner. At the commencement of a science course the teaching cannot be too simple, and it must be very clear and definite. Each step taken should logically follow from the work already done, and every experiment should be undertaken with a definite object, which should be fully understood and appreciated by the class. In working out a course of this kind, the teacher might, with advantage, follow an imaginary research path into the subject, but the scholars may not become conscious of this, and it is quite unnecessary that they should. If scholars are taught to observe the progress of an experiment in a vague sort of way, and asked to deduce results from their observations, without being told definitely what to look for and how to look for it, the only result of the work is waste of time. In fact, until the scholars have acquired a little knowledge of the subject, it is useless to expect them to reason for themselves in the way necessary to follow out even the simplest research. Reasoning of this kind involves a knowledge of the facts and principles of the subjects, and a beginner's time is best employed in acquiring this knowledge under the guidance of a competent teacher!

This presentment of the question may appeal to some who are not versed in the work. It is no question, however, of force of arguments adduced, but one of facts established, and of experience gained in practice among scholars of every type. It is in no sense mere opinion on my part, but a conviction gradually forced upon me and established beyond all doubt by actual trial and observation during many years past, that the beginner not only may but must be put absolutely in the position of an original discoverer; and all who properly study the question practically are coming to the same opinion, I find. Young children are delighted to be so regarded; to be told that they are to act as a band of young detectives. For example, in studying the rusting of iron, they at once fall in with the idea that a crime, as it were, is committed when the valuable, strong iron is changed into use-



less, brittle rust, and with the greatest interest set about finding out whether it is a case of murder or of suicide, as it were—whether something outside the iron is concerned in the change, or whether it changes of its own accord.

A lady teacher who had thus presented the case to a class of young girls told me recently that she had been greatly amused and pleased to hear one of the girls, who was sitting at the balance, weighing some iron that had been allowed to rust, suddenly and excitedly cry out, "*Murder!*" This is the very attitude we desire to engender; we wish to create lively interest in the work, and to encourage it to come to expression as often and as freely as possible.

It is of no use for the teacher merely to follow an imaginary research path: the object must ever be to train children to work out problems themselves, and to acquire the utmost facility in doing so. Of course, the problems must be carefully graduated to the powers of the scholars, and they must be insensibly led; but do not let us spoil them by telling them definitely in advance what to look for and how to look for it: such action is simply criminal.

My experience teaches me also that it is the grossest libel on young scholars to say that it is useless to expect them to reason for themselves in the way necessary to follow out the simplest research; but, unfortunately, if you substitute teachers for scholars this is too often a true statement, and here the supreme difficulty of properly carrying out heuristic teaching comes in. It is the teachers who are preventing advance. Let us teachers recognise this; but do not let us overlook and misrate the powers of young children. Let us try what we can do, and if we do not at first succeed, let us try and try again; we shall surely succeed if we can only adopt this attitude. But, if we fail, let us give up the work as soon as possible, and leave it to others to succeed where we have failed. No other policy is an honest one—for the teaching of young children should never be regarded as a perfunctory task, but as a sacred office. The whole policy of the teacher's duty is summed up in one little word, yet the most expressive in the English language; it is to train pupils to *do*. On this it is easy to base a simple test of competency.

It is needless to say, young scholars cannot be expected to find out everything themselves; but the facts must always be so presented to them that the process by which results are obtained is made sufficiently clear, as well as the methods by which any conclusions based on the facts are deduced. And before didactic teaching is entered upon to any considerable extent, a thorough course of heuristic training must have been gone through in order that a full understanding of method may have been arrived at, and the power of using it acquired; scientific habits of mind, scientific ways of working, must become ingrained habits from which it is impossible to escape. As a necessary corollary, subjects must be taught in such an order that those which can be treated heuristically shall be mainly attended to in the first instance.

Largely in consequence of the discussions that have taken place as to the presumed antagonism of religion and science, the public have been led to misconceive the position of the scientific worker, and to disregard the moral value of scientific training. It is very important, therefore, to emphasise the fact that experimental work, when properly conducted, affords means of developing character unquestionably superior to any provided by the other subjects in the school curriculum, mainly because it touches upon daily practice at every point, as well as on account of its disciplinary value. This argument is seldom brought sufficiently into prominence, and it is difficult, moreover, to recognise its force as long as the teaching is so imperfect as at present. I know of few cases in which the value of science has been so clearly acknowledged from this point of view as it was by Mrs. Fenwick Miller, then a member of the School Board for London, in the course of the discussion at the Health Exhibition Conference in 1884, on a paper read by Miss Beale on the curriculum of a girls' school. After expressing the opinion that women were specially capable of taking scientific principles and drawing from those scientific principles practical rules for daily conduct, and that in the future women would have a special work to do with regard to education, Mrs. Miller made the remarkable statement, "She believed the way they would work it out was chiefly by morals, she meant the practical conduct of daily life; and she believed there would be a development, of which they did not dream, of morals founded upon science, of good conduct based upon reason, and upon reasoned facts, such as had never yet been seen, and such as they could hardly conceive. She believed that the great work for which the world was waiting was a science from which they could daily draw their life lesson. . ."

Among the various ways in which, when properly conducted, heuristic experimental studies conduce to the formation of moral and intellectual character and purpose are the following:—

In the first place, interest is excited in common objects and common phenomena, and these are gradually studied—not merely talked about. Children are thus encouraged to look about them—to be properly inquisitive and enquiring.

They learn to use a balance, to weigh and measure, and not things only, but deeds and words also—for whatever is done is done exactly; measurements are made whenever possible, and their value as the means of making exact statements is cultivated by use—measuring and weighing, in fact, are so constantly practised as to become ingrained habits.

Habits of observing correctly are acquired. Neatness and care in all work is insisted on. The waste of materials is in every way discouraged, and the practice of economy inculcated. The habit of patiently attending to details is acquired.

The power of reasoning from observation is cultivated in every possible way—a logical habit of mind is thus developed. The use and value of evidence becomes obvious, and that nothing may be taken for granted is insisted on. The faculty of reasoned judgment is cultivated.



The power of devising and fitting up apparatus, as well as of devising and carrying out experiments is cultivated. Thus handiness is acquired.

Surely a sufficient list of possibilities.

Many practical problems must, however, be solved before suitable studies can be effectively introduced into schools generally and these results secured.

It stands to reason that the instruction can only be properly given by sympathetic cultured teachers, capable of engaging in elementary research work; and if the subject be not in the hands of the head of the school, it must nevertheless be accorded the fullest sympathy, and not rated inferior to any.

The provision of proper teachers will occasion the greatest difficulty until our colleges and universities take the requirements of teachers into account. The instruction given at Training Colleges at the present time is as anti-heuristic as it is possible to make it, so that little help can be derived from them. There is no doubt indeed that very special steps must be taken to secure a supply of competent teachers of both sexes.

But that universal bugbear, the time-table, steps in even where the conditions are otherwise favourable. In the early part of the course there is no difficulty in treating the subject like all others; but when experiments involving the use of apparatus come to be made, little can be done in the time devoted to an ordinary lesson.

In all probability the time difficulty will never be properly met unless a radical change in our method of conducting schools be effected: until a new conception of school life is introduced, based on due recognition of the fact that, as Huxley puts it, "the great end of life is not knowledge but action."

Significant passages like the following are well worth attention in this connexion:—

At ten o'clock every morning the Napier boys proceeded up the village to school, and at three they came down the single street for home. Great was the commotion when this hour of breaking-up arrived; it was the event of the day for the villagers, and no wonder, for then a strange sight was often to be seen. There were pigs in Celbridge in those days, tall, gaunt animals, with wide, flapping ears that hung over their eyes, and long legs that could gallop over the ground; and it is said that, mounted on the backs of these lean and agile hogs, the Napier boys were wont to career homeward with scholars and pig-owners following in wild pursuit.

"What a terrible training!" I think I hear some worthy parent or pedagogue exclaim, reading this deplorable incident. And yet it is not all so clear—this method of boy training. Would not the guiding lights of Eton and Harrow and Rugby stand aghast at such companionship, such a scene as this hog-race down the village? Still, somehow or other, when I walk round Trafalgar Square or down Waterloo Place, I seem to miss those great centres of training in the statues of Nelson, Havelock, Franklin, Clyde, Gordon, Lawrence, Napier; and I see beyond the bronze on the marble the boy-hero at his village school—one at Foyle, another at Taunton, a third at Celbridge, a fourth at St. Ives, a fifth at Swanscombe—until I come to think it is not quite so certain that we know all about the matter. So, too, when my mind turns to the subject of military teaching, and I compare the course of school training Charles and William Napier received at the hands of Mr. Bagnel with our modern system of competitive cramming,



I am forced to the conclusion that both these brilliant soldiers would have been ignominiously "plucked" for entrance to Sandhurst or Woolwich; nor does the outside and casual training which these boys underwent show with less disadvantage beside our modern system.—*Sir William Butler's "Life of Sir Charles Napier."*

No one better understood the value of action than Napier himself, and nowhere has it been more clearly implied than in a significant warning he uttered, in pointing out defects of our Indian Government, words to which Sir Wm. Butler has timely called attention: "The rifle perfected will ring the knell of British superiority. The *charging shouts* of England's athletic soldiers will no longer be heard. Who will gain by this new order of fighting? Certainly the most numerous infantry." The soldier of industry may well ponder on these words. It has happened in our time that not only has the knell of British manufacturing superiority been rung, but we are shown to be at most equal to others in many things, inferior in not a few, and still superior in scarcely any, and this has happened through the perfecting of machinery, and especially through the application of science to industry. Surely, then, in the sphere of industry, it is time we gave up fighting with bows and arrows and learnt to use machine guns. We have no right to complain or even to be jealous of others who have too long perforce lain idle, and who have at last been wisely led to exert themselves: the activity of our competitors can only be met by further and increased activity on our part. Action will ever count very highly in dealing with masses and leading them—but the more active the followers the greater will be the opportunity of the active leader. Let us then guard our future by introducing into our schools an education calculated to promote action. Results show that our present system has precisely the opposite effect: the majority of scholars stream towards the clerk's desk and sedentary employment, for which their education affords some preparation whilst providing practically none for a life of action. We must not only protest, but revolt against and depose those who hold the nation back through want of culture and failure to understand the conditions of the problem. Surely our schools should give an education that is liberal in every sense of the word.

To this end, we must give up a large proportion of the desk work done in schools, and instead of enforcing silence, encourage our scholars to enter into rational conversation about the work they are doing. Why is it that our children so seldom talk about their school work? Why is so much trivial conversation indulged in on all hands? Why is so much trivial literature read? Is it not because so little encouragement is given to rational conversation and reading at schools?

When our pupils engage together in the work of discovery and are set to find out things themselves, they will naturally be led to discuss their work together, to exchange views, to ask each other's advice, and they will be so interested in their work that they will not fail to talk about it. Nothing could be less

rational—less truly preparatory for the work of life—than the system of enforced silence we enjoin; but it is a necessary outcome of didactic class teaching, extravagant indulgence in the use of books, and disregard of all tools and weapons other than the pen.

In all schools open in the afternoon, after the mid-day meal, I would only allow work to be done in the workshop or workroom—a room in which scholars can move about freely and do all kinds of practical work—and several mornings in the week should also be spent there. In schools such as Girls' High Schools, where the practice prevails of giving lessons only in the morning, at least two mornings should be given up to workshop exercises. It would be better in such schools to substitute attendance in the school workshop for some part of the excessive amount of home work exacted. In many schools—country schools especially—I would have little else but such work, or equivalent outdoor exercises in the experimental gardens, which will, I believe, in the future be held to be an essential feature in their equipment. Gradually I would have nearly all class rooms converted into workrooms or workshops.

The use of the words workroom and workshop is in itself not unimportant—they are good English, I believe. Laboratory—an un-Saxon term—is without significance to English ears in comparison with them; even its pronunciation gives rise to difficulty.

When class teaching is the order of the day, it is easy to exact attention and silence in the workroom by ringing a bell; at other times, teachers would constantly move about, noticing what is being done, criticising and giving brief directions to one group of pupils after another. The system is simply that pursued in many college classes. Young children will work as steadily as their elders if only they are properly disciplined from the very outset, or under almost any conditions if interested in their work. Moreover, when such a system is adopted, an effective punishment will be a few days' banishment from the workroom to the bread-and-water-solitary-confinement atmosphere of the old-fashioned class room.

Of course it will be said: "But such a scheme is purely chimerical; it is the dream of an idealist, of a theorist who has no acquaintance with, nor conception of, practical possibilities." Quite so! But most of my friends who were teachers in schools were good enough to say that the British Association scheme was an impossible one to carry out in practice; and yet a couple of earnest men, without preconceived views but full of common-sense, in the course of half a dozen years succeeded in applying it to a large number of scholars in public elementary schools, which, surely, are sufficiently difficult and unpromising material to deal with. Many teachers in our great public schools, I know, still hold such a view; but no one expects such schools to reform before the millennium is reached; they are in the toils of our ancient Universities, and too fully engaged in classical scholarship to consider what is good for boys generally.



After all it is mainly a question of attitude. The revolution advocated could be effected if only it were seriously entertained; if the matter were considered not from the point of view of the mere student but on the assumption that school training must be regarded as a preparation for the diversified work of life; if the heads of schools and university authorities could only be led to see that it is now necessary to substitute "well-practised" for the expression "well-read" in which it is usual to embody the scholastic ideal of proficiency.

And, after all, the inevitable must happen. Why cannot we, therefore, recognise this and in every way hasten the advent of a reform so urgently needed, and especially as the thin end of the wedge is already inserted, for among the conclusions formulated in the report of the Technical Education Board of the London County Council to which reference has been made, the following are to be found:—

1. That chemistry is a valuable subject for school teaching, but that it should not exclude training in mathematics and languages, but should with these form part of a general education.
2. That it should be preceded by an elementary course of physics, to be treated as much as possible as exercises in measurements and practical arithmetic.
3. That the work should be always largely practical.
4. That attention should be paid to the style of the daily record of work, so that it may serve as an education in handwriting, grammar, and English composition.

These are sufficiently important recommendations to come from such a Committee, and I rejoice to learn that they are already being attended to in many London schools. The last is, if possible, the most important of all, as it clearly contemplates what may well be termed the workshop method of instruction; but drawing should have been included.

At present little attention is given in most schools to handwriting, and still less to drawing; handwriting is spoilt rather than improved, as boys and girls are called on to scribble down a vast quantity of notes of lessons dictated at them. In the future this system, let us hope, will give place to a rational one from which hurried writing is abolished, and in which every lesson involving writing will be a lesson *in* writing. Also, however much attention may be lavished at school on grammar and composition, when young people leave school, as a rule, they cannot write six lines of plain English descriptive of common objects or events, or of anything they themselves do. Many, perhaps, have learnt to compose plausible essays on the Imagination, the Infallible or the Infinite; but a simple personal report, giving an account of the work carried out under their very eyes, or even with their own fingers, is entirely beyond their power.

It is to be hoped that when scientific method is introduced into schools all this will be changed. Let us consider what may be done. An elementary course of physics, treated as much as possible as exercises in measurement and practical arithmetic, is to come first, we are advised. As it is easy to



teach children to use figures, to measure and weigh, and do simple arithmetic with the aid of a foot-rule, even before they can either read or write, such work will have been begun in the Kindergarten class, and in school will from the outset take the place of conventional arithmetic. In this work will be included the drawing of lines and simple figures of given dimensions with the aid of T and set squares, *accuracy being insisted on*; and colouring will be resorted to whenever possible. During this period, among other things, leaves of various kinds may be collected, their outline traced or drawn, the venation sketched in, and the attempt may even be made to appropriately colour such sketches. The children will also be led to take note of the various materials of common occurrence, and to collect specimens of these. As soon as flat figures are understood—the square, oblong, triangle, etc.,—"boxes" or solid figures may be built up from these, and the idea of volume early established. Such teaching may be varied in an infinite number of ways. No books will be used, but the class will gradually write its own book and so come to understand how books are written: for whenever an object has been properly studied, the teacher, instead of dealing with the scholars individually, will call them to order as a class, and by judicious questioning will then elicit all that is needed for the description of the work done. The simplest possible account will be written on the blackboard as the questioning proceeds, and at the close of the lesson a senior pupil will copy this with a typewriter, and each member of the class will afterwards receive a copy, which will at once be pasted in a book, to be kept for reference and used as a reader.

But as soon as they can write, children will be required themselves to make out lists of the things they have collected, and as they systematically study these, to note down their origin, use, colour, and other properties obvious to them. And then they will go on to make experiments to ascertain properties which are not quite obvious. For example, they will be provided with a simple anvil—a common flat-iron turned upside down and supported in a box—and with the aid of this will find out that metals are more or less soft and may be bent and beaten out, that other substances are hard and brittle, and so on. Then, by measuring and weighing regularly shaped blocks, slabs, or plates of wood, stone, or metal, the differences in density of different stuffs will be discovered. The blocks required for these measurements should, at least in part, be fashioned by the class, and there is no reason why girls as well as boys should not do such work, as they would thereby learn much of the nature of the materials in common use, and also how to manipulate simple tools. The choice of materials for examination would, however, be largely influenced by locality and the special requirements of the scholars, and girls and boys might often be treated somewhat differently in this respect.

Most children take the greatest interest in finding out what they can about the things that are before their eyes and in com-

mon use, and, if properly led at the outset, soon acquire the habit of helping themselves and working systematically. And by thus selecting some object for study, and teaching several subjects at once, so to speak, the time given to the several subjects when taught in distinct lessons may be secured for one lesson. The advantage being that the teacher—or teachers where several combine to take one such composite class—could then find time to pass round the class and criticise the doings of each pupil. To make such teaching effective, the account of the work done should be most carefully written out by the worker *as the work proceeds*—the dictation of notes by the teacher being regarded as a criminal offence—and no rough notes should be permitted. Such accounts will necessarily be brief, and it will be easy for the teacher passing through the class to quickly comprehend what has been done, to underline the mistakes made, or to give any necessary explanation. The child would then be at once informed what was wrong, and guided in correcting mistakes, and in future work. Under the existing system of correcting exercises out of school, not only is a most grievous burden imposed on teachers to the great detriment of their health and always of their efficiency as teachers—for no work is more soul-destroying—but corrections so made never come properly home to the scholars, and more often than not are unnoticed. “Take care of the pence and the pounds will take care of themselves” may be translated for school purposes into “Attempt little, but let that little be as near perfect as possible.” If we can but lay the foundations of method at the outset, great things may be done subsequently. Let, then, each day, some simple task be set; insist that this is carried out with scrupulous care and equally carefully recorded in very few lines of clear simple language. Whenever possible have illustrative drawings introduced into the record; teach spelling by calling attention to mistakes and requiring these to be corrected by reference to the dictionary—a book which should be in constant use, but is rarely consulted except by those who have grown ashamed of spelling badly. Ask for the meanings of certain words used in the record, and have various parts of speech selected, and even go so far as to require certain words to be translated into French. As the work proceeds, more and more difficult tasks may be set.

In later work, when the problem stage is reached, a certain order in entering the record of work should always be insisted on. First should come a clear statement of motive—of what is to be attempted, what it is desired to find out. This should be followed by an explanation or justification of the particular form given to the experiment. The why and wherefore being thus made clear, an exact account of what is done should follow; then would come the observations made and the results obtained. The conclusions to be drawn and their bearing on the question under discussion having been most carefully pointed out, the next experiment should be led up to. Throughout, the language should be such as to make the account a personal one, leaving



no doubt that something which had been done and witnessed by the writer was described. At present every boy and girl from school, when asked to describe something, will tell *you to do this* or that; or that *if you* do so and so, this and that *will* happen. They simply repeat the words used by their teachers. If training can be given in schools on the lines above indicated it will be simply invaluable as a preparation for the work of life.

Of course there are many difficulties to be overcome. To teach scientifically will always be more difficult than to teach mechanically. But scientific teaching—not the teaching of science—is imperatively demanded of us, and we must find out how to give it. The problem is one that can only be solved by trial—by *heuristic means*.

As showing how such work has been begun in Elementary Schools, I append (Appendix C) a short account by Mr. Heller of the method Mr. Gordon and he had adopted. Mr. Heller has also favoured me with a statement of the impressions he was led to form, which I also append (Appendix D), together with the opinions expressed by Professors Fitzgerald, Miall, and Smithells, after visiting several of the schools in which Mr. Heller taught.

In the introduction to the Headmasters' syllabus of instruction in Elementary Science, it is stated, it will be noticed, that the course is intended for all boys and girls *commencing* the study of science. This provision is one of very great importance from an educational point of view, as its acceptance involves the admission that other branches of experimental science cannot be usefully studied until the elements of physics and chemistry have been mastered. This principle, I venture to think, is beyond all question, although I fear there are yet many by whom it will not be regarded as established. Let us hope that even these will gradually become convinced as they reflect that practice in measurement is of altogether fundamental importance as the foundation of all scientific procedure; and that as life is one unbroken series of chemical changes the comprehension of the nature of chemical change is also of the utmost value to all.

Parts of the course, however, are undoubtedly of less importance than others to the majority of students, and their consideration may well be either postponed or even omitted in favour of extensions of the course in other directions.

The part of the physical course dealing with forces is in this latter category. Again, although the discovery of the composition of water is of the very highest value as an educational exercise, for most purposes of ordinary life the knowledge that water is a compound of hydrogen and oxygen does not come into account—such knowledge is essential only to the engineer and other specialists. Therefore, if required to omit any part of the exercises, I should not hesitate to postpone those leading up to the discovery of the composition of water in order to retain all relating to the study of air, fire, and earth, the last as typified by chalk. But the comprehension of the nature of food materials and of their function as heat producers, etc., is of the utmost consequence to all; their study should on no account be omitted,



if possible, and the composition of water might well be discovered before attempting their examination.

With these limitations, both the series of exercises specified are of extreme value, on account of the discipline they afford as well as of their bearing on matters of everyday importance, affecting all alike. But to make the course in any way complete, from the point of view here put forward, it should be supplemented by a series of exercises calculated to excite an interest in plant growth and serving as an introduction to the comprehension of physiological processes. Parenthetically, I may point out that the teaching of physiology proper in schools, except to really advanced pupils, cannot be too strongly deprecated. There is no greater fraud on public credulity practised in schools than that involved in teaching this subject.

It is true that botany has been introduced of late years, more especially into girls' schools, as a means of satisfying the growing popular demand for science; but, unfortunately, the methods adopted have in too many cases been such as to deprive the teaching of all value as training in scientific method. In fact, the reason for selecting it has frequently been that it could be taught without special apparatus.

A suitable practical course for the purpose here contemplated remains to be devised. Professor Marshall Ward, however, has, at least, taken the first step towards framing a scheme in a syllabus which he originally prepared for the Major Scholarships Committee, and which is now included in the programme of the Joint Scholarships' Board Examinations. In order that his suggestions may not remain buried in the oblivion of a set of scholarships' regulations, I venture to reproduce them here, merely remarking that they seem to me to afford a capable teacher ample material for a series of intensely interesting and instructive heuristic exercises—some of which might be carried out coincidently with the earlier lessons of the elementary science course, and others after the problems in the chemical section had been worked through.

The possibility—nay, the need—of adjusting the "science" exercises to meet special and local requirements has been implied, if not directly adverted to in the course of this article. It is in this direction that there is so much opportunity for capable teachers to display originality, and scope for their talent.

On the human side we all have like requirements, although the needs and powers of some extend further than those of others; but as workers and as men and women we are called on to execute varied tasks. These considerations must govern our education and regulate the extent to which it is made alike for all, and to which it is diversified.

It is to facilitate such treatment of the subject that it is imperative that the fullest understanding be arrived at of the object in view in introducing practical heuristic studies into schools; that it be recognised that it is not intended to teach any separate branch of science, but that our one purpose is *to give training in scientific method*—as a means of developing faculties at present rarely cultivated, but essential to the suc-



cessful performance of all ordinary duties. The general public will be with us instead of against us, when this is once understood; and ceasing to regard science as an extra, they will welcome it as a means of making school education a more practical preparation than it is at present for the work of life.

But we shall have revolutionised our entire school system in attaining to this end.

It may be desirable that before concluding I should briefly refer to the special provision to be made in schools for experimental work; but rather by way of caution, for on this subject there has been much misunderstanding. Architects knowing nothing of the requirements have too frequently built, and at the present time are building, school laboratories which are mere slavish copies of those provided in colleges where technical education is given; and most unfortunately, following the same example, some public authorities have declined to recognise laboratories unless provided with sinks innumerable and other elaborate fittings; consequently, not only has great expense been unnecessarily incurred, but buildings have been erected altogether unsuitable for the elementary teaching proper in schools. Instead of being put on the commonplace footing it should properly occupy, experimental work has, therefore, necessarily been regarded as a somewhat expensive luxury to introduce into a school. And this will ever continue to be the case until—no doubt in the dim future—governing bodies see that it is greatly to their advantage to consult those of us who are really capable of advising in such matters. When we are directly appealed to and asked to act as professional advisers, and architects are required but to carry into execution schemes arranged with and sanctioned by us, for which we are held primarily responsible, there will be some chance of more economical and practical provision being made. Undoubtedly we too are sure to make mistakes, and, like doctors, we shall differ considerably among ourselves; but we can scarcely fail to display some understanding of our business, and to appreciate the relative advantages of the various suggestions made, as well as judge of the suitability of the materials proposed. It is useless for architects to go about as they or their representatives often do at present, inspecting laboratory after laboratory, without ever properly grasping the meaning of what they see—consulting one teacher after another, until bewildered by the apparent diversity of opinion with which they meet, they return home in despair, and with the assistance of a clerk or draughtsman in the office—do the wrong thing for the actual purpose in view.

For work such as is contemplated in this article there must be ample room provided, but otherwise there need be no very special arrangements made.

Benches of the kitchen-table type, which need not even be fixed, suffice for nearly all purposes. These must be provided with gas, but not with water, one or two long sinks made of wood—elongated washing tubs—and conveniently situated being sufficient to meet all the requirements of a large class; more are only provocative of endless trouble and untidiness due to con-

stant spilling of water, besides which they engender a wasteful habit of squandering water which cannot be too severely deprecated: in fact, when the day comes that we shall have taught all children at school how to wash out flasks, test tubes, etc., properly, and with the minimum expenditure of water, we shall have introduced a truly scientific procedure into our teaching, as well as into household economy. In most schools, together with movable benches such as have been referred to, it will be desirable to provide one or more benches fixed against the wall of the room, having cupboards fixed in the space underneath. Four cupboards may conveniently be constructed in two tiers under the length of bench provided for a single worker; a tray which will slide in and out may with advantage be fitted at the top of each such cupboard. It is quite unnecessary to construct the bench tops of expensive hard wood—any well seasoned wood will suffice; but whatever the wood, it should be made impervious to water, acid, etc., by ironing in paraffin wax.

As operations involving the production of unhealthy or unpleasant fumes need very rarely be conducted, a single draft closet is sufficient. This may conveniently be fixed behind a long narrow demonstration table placed on a raised platform at one end of the room.

A considerable amount of wall space behind this table should be converted into a blackboard by pinning against it by means of a light wooden framework the specially prepared black canvas which is sold for this purpose. All free wall space should have upright battens affixed to it at regular intervals, to which shelves may be attached wherever necessary, and hooks screwed into others for hanging up things.

As to apparatus, it should be gradually provided to meet requirements as they arise, and every effort should be made to utilise ordinary articles—medicine and pickle bottles, jam pots, saucepans, etc.—and to construct apparatus in the workroom; for this latter purpose a carpenter's bench and tools, vice and files, a small lathe, an anvil, and even a small forge should, whenever possible, form part of the equipment. Infinite injury is done at the present day, invaluable opportunities of imparting training are lost, by providing everything ready made.

But there are certain articles which *must* be provided—notably centimetre-foot-rules, drawing boards, T and set squares, and balances. The best rule to provide is one made of steel, graduated on one face to millimetres and centimetres on the one edge, and to inches on the other; if the inches are subdivided into twelfths, an opportunity is afforded of contrasting decimals with duodecimals. It is advisable to have the rule graduated on its second face into inches and tenths and lower decimals and subdivisions on the one edge, and into inches and 16ths, 32nds, etc., on the other. Such a rule is a perpetual object-lesson; its possessor cannot help visualising twelve inches and thirty and a-half centimetres as practically equivalent lengths.

But even more fundamentally important, if possible, and altogether indispensable and essential as the primary weapon of heuristic instruction is a proper balance. There is no question



that in the future the test of efficiency in a school will be the extent to which suitable balances are provided and used.

"Gott hat alles nach Zahlmass und Gewicht geordnet," are words which ever and again flash before my eyes, recalling the time, over thirty years ago, when I first saw them written on the wall of the chemical lecture theatre of the University of Leipzig. They express a truth, but too rarely realised—a truth which we should seek to impress in principle on all children as the foundation of thrift; the balance, in fact, is an all-powerful, indeed the only instrument which directly enables us to inculcate thrifty habits.

For school use, there are no balances to compare with those made by Becker and Sons, of Rotterdam. That sold by their London agents, Townson and Mercer, of Bishopsgate Street, as No. 66, at a cost of 35s., is the one most to be recommended. Such balances are most conveniently placed on separate small shelves, supported on brackets attached to the walls; when not in use, the balance must always be kept covered either by a light wooden case or by one made of stout cardboard and covered with bookbinder's cloth; this is much better than an immovable glazed case with rising front, as it allows of far greater freedom in use. If properly used and looked after, a balance will last for years. To abandon a few of the worthless text books with which scholars are now so overburdened will in itself be an advance, and if an instrument by the use of which character is necessarily developed be substituted for even a single one of the conventional soul-destroying manuals now in use, we shall have still greater cause to congratulate ourselves.

It will not do to use any kind of balance: the common see-saw suffices for the demonstration of principles, and so long as nothing more is in view no other instrument than a see-saw is needed. Nor is the balance to be used merely as a means of obtaining fairly accurate quantitative results. Mr. T. G. Rooper, one of Her Majesty's inspectors of schools, in giving evidence recently before the Irish Commission on Manual Training in Primary Schools, referred to a balance which he had himself constructed at a cost of 2d., and spoke of the accuracy of the results he had obtained with it. This may well be, but such an instrument never does and never can inspire the respect which is paid to a well finished sightly instrument by nearly all young children.

The balance, let me again insist, is to be regarded as an instrument of moral culture, to be treated with utmost care and reverence.

But probably when authorities have grasped and applied this fundamental article of the heuristic creed, it will no longer be necessary to urge that scientific method be taught in schools generally: for attention will then be paid to the uniform development of all the intellectual faculties, because the, as yet, barely established art of education will have attained to the dignity of a true science.

August, 1898.

HENRY E. ARMSTRONG.

## APPENDIX A.

COURSE OF INSTRUCTION IN ELEMENTARY SCIENCE  
ADOPTED BY THE INCORPORATED ASSOCIATION  
OF HEAD MASTERS.

## PHYSICS AND CHEMISTRY.

In preparing the accompanying Syllabus of a course of instruction in Elementary Science the Committee have been actuated by the wish to indicate both to teacher and to examiner what experiments can suitably be performed by beginners.

A large proportion of the time given to the subject should be occupied by the pupils in performing actual measurements themselves; demonstrations are not excluded, but should occupy a secondary place; text-books, however, should be avoided as far as possible.

This Course is intended for all boys and girls commencing the study of science. It represents, in the opinion of the Committee, a suitable commencement for those who continue the subject, and indicates the manner in which it may be made of true educational value to those who do not pursue it further.

The first four sections of the Physics Syllabus, involving measurements of length, area, volume, and mass, should under any circumstances be taken first; they constitute a course of practical arithmetic and geometry exercises, and give infinite opportunity for problems upon ordinary surroundings.

The remaining sections of the Physics may be taken alone or simultaneously with the Chemistry Course, and the age at which it should be commenced may be left at the discretion of the teacher.

It is not intended that the teaching should be limited, either to the experiments here given, or to the order in which the different subjects are stated. It is hoped that these experiments will be sufficient to indicate the lines on which the teaching should be based, and to assist the teacher in inventing others.

## ELEMENTARY PHYSICS.

The graphic and experimental work in the following Syllabus is intended to serve as an introduction to physical science, bearing in mind its necessary co-ordination with general mathematical work.

With this object in view, it is essential that the instruction should be given in a strictly logical order, and the attempt be made to give a proof of each step taken, following as far as possible a proper order of sequence. In the mensuration exercises, and, in fact, in carrying out all the work of the Syllabus, no formulæ of any kind should be used.

The exercises are arranged so that pupils may themselves discover the facts and be led to formulate definitions, and this they must be encouraged to do in every possible way, that they may become acquainted with some of the fundamental properties of matter and fundamental natural laws; and that they may be led to understand the reasoning used in deducing definite conclusions and generalisations from the results of their own observations and discoveries.

The apparatus required for the mensuration exercises is tracing-paper, a rule graduated to inches and tenths, and to centimetres and millimetres, a pair of compasses, set and T-squares, and a protractor. Although the mensuration course may be taken in an ordinary class-room, it is advisable to give such instruction in a laboratory, where the pupil is surrounded with apparatus, and is in an atmosphere of measurement. The hydrostatics, heat, and part of the mensuration should, as far as possible, be taken in a laboratory suitably fitted; but a large number of the experiments can be done in an ordinary class-room. The fittings for a suitable laboratory

are very simple. All that is wanted are tables 8ft. by 4ft., with gas laid on to the centre. At the sides of the room and near each table there should be a water supply. For the mensuration, hydrostatics, and heat, the apparatus required consists of sets of scales weighing from 500 gm. to 0.1 gm., a metre scale graduated to millimetres, tin cans, tin or copper pots, glass tubing, blocks of wood, cylinders or cubes of iron, copper, and other material. The apparatus should be provided in sets, if possible, one set for two pupils working together.

### 1. *Measurement of Length.*

Books, pens, pencils, floor, walls, and all available materials should be measured in English and metric units. The straightness of a line should be tested by means of tracing-paper, and comparisons of ruled lines made by means of scales and dividers.

Triangles and other straight-lined figures may be drawn upon paper, and their sides measured. Curved lines should be measured by means of threads, and by rolling a disc along them; the distance round cylindrical surfaces, such as that of a glass bottle, should be measured by twisting thread round them, and the ratio of the diameter of a circle to its circumference discovered.

The use of the plumb bob and of the spirit level having been explained, the character of perpendicular and inclined lines, squares, parallelograms, etc., should be discovered with their aid.

### 2. *Measurement of Area.*

**UNIT OF AREA.**—The square inch and square cm. should be drawn. Areas of squares and oblongs should be found by drawing upon paper and dividing into units, by drawing upon "squared" paper and counting squares, or by cutting out in paper and weighing. The same methods can be adopted for finding the areas of triangles, parallelograms, trapeziums, and polygonal figures, care being taken that the areas of the first three are reduced to area of equivalent oblongs, all formulæ being carefully avoided. The principles of land surveying and the use of off-sets in the division of irregular areas into figures already understood should be explained and illustrated with examples to be drawn and worked by the student.

**AREA OF CIRCLE.**—Circles and their equivalent figures (equal to  $3\frac{1}{2}$  times square on radius) should be drawn upon paper, cut out and weighed, or circular discs of paper may be weighed and compared with weight of unit of area of same paper; or the drawing upon squared paper may be adopted. In this way the relations between area of circles to their diameter should be ascertained.

**SURFACE AREA OF SOLIDS.**—The surface area of common solids, as oblong blocks, cubes, cylinders, prisms, cones, etc., should be determined by wrapping round with paper, and afterwards developing and measuring the areas of the paper by methods already used.

### 3. *Measurement of Volume.*

To gain an idea of their dimensions, single units, viz., 1 c.c., or 1 cub. in. should be cut from soap or wood, and a cubic decimetre or litre made from cardboard.

The volumes of rectangular blocks, prisms, and cylinders should be measured. The use of burettes and graduated vessels having been learnt, the volumes of irregular solids should be found by placing them in liquid in a graduated vessel.

The volumes of various simple solids should be expressed in terms of the volume of their equivalent prism or cylinder; thus the volume of a cone should be ascertained to be one-third the volume of a cylinder of same base and height, and this can be done either by weighing or by use of graduated vessel.



4. *Measurement of Mass.*

Units of mass and weight having been brought under notice, a lever should be constructed from a boxwood rule laid over a fulcrum, and its laws discovered by suspending weights at different distances. The use and construction of the balance having been explained, the blocks, etc., previously measured should be weighed, and their density found, as well as definite volumes of water and other liquids measured and weighed. Graphic representations of densities should be constructed with the data thus obtained. Lastly, the construction and use of the spring balance should be studied, and the difference between it and the balance made clear.

5. *Measurement of Density.*

Densities and relative densities should be found and compared by weighing blocks or cylinders of different solids (wood and metal), the volumes of which can be calculated or found as above.

A 2 oz. bottle having had a nick filed along the stopper, the weight of water which it contains should be ascertained, hence its volume in c.c. It should then be filled with other liquids and weighed, and thus their density discovered. The volume of small solids—as shot, nails, etc.—should be found from the weight of water which they displace.

6. *Measurement of Thrust and of Pressure, of Pull and of Tension. Distinction between solids, liquids, and gases.*

Attention should be directed to the elasticity and plasticity of solids by experiments upon india-rubber, steel, and copper springs or rods, pieces of lead, putty, cork, etc.

Experiments should be made on the flow of sand, pitch, treacle, water, etc., leading up to the discovery of the horizontal surface of a liquid at rest, and to the distinction between solids, liquids, and gases, and the mobility of particles of gases shown by their diffusion.

Fluid pressure should be expressed as "inches of water" or "lbs. weight per unit area." The pressure of the gas in the laboratory should be measured in inches of water with a U-tube. Water or other liquids, and mercury should be poured into different arms of U-tubes having the two arms of different sizes. Pressures at different depths under water should be measured with a U-tube containing mercury. The U-tube should now be used for determination of relative densities of liquid.

Air should be proved to have weight by boiling water in a Florence flask, weighing, closing it while full of steam, allowing air to enter, and again weighing. It should be proved, by using an air-pump that air exerts pressure, and the principle of the barometer should be explained. A siphon barometer, with the short limb adjustable, having been constructed, daily observations should be made and plotted on square paper. Boyle's law should be discovered for pressures greater and less than atmospheric pressure. The action of the syringe, the suction-pump and force-pump should be investigated.

7. *Measurement of the force which a liquid exerts upon a body immersed in it.*

A block whose volume is known should be weighed in air and in water; the weight of water displaced should then be found by measurement, and shown to be equal to the "up-thrust." This should be done with solids heavier and lighter than water, wholly and partly immersed in different liquids, and thus the force exerted on a body immersed in a fluid made clear. The laws of floating bodies should be discovered by using a block of wood made to float at different depths by addition of lead, or a test tube containing a paper scale and shot which is adjusted to cause floating at different depths. These principles should be applied to the deter-

mination of densities of solids and liquids, and the relation between weight, volume, and fraction immersed in the case of floating bodies should be shown, to lead up to the use of the hydrometer.

### 8. *Measurement of Temperature.*

Observations on the melting and boiling points of water having been made, the construction of the thermometer should be explained, and the fixed points noted.

Familiarity with the use of the thermometer in its various forms—maximum, minimum, clinical, etc.—should be gained, and daily observations of temperature made, and plotted on squared paper.

In order to study radiation, a vessel of water containing a thermometer should be coated with different substances—lampblack, tin-foil, etc.—and the time taken to cool through various temperatures observed.

In order to study absorption, the thermometer should be allowed to cool while supported in a vessel coated inside with various substances.

Conduction should be illustrated by the melting of wax on bars of different metals, of the same size.

### 9. *Measurement of Quantity of Heat.*

Known weights of water at different temperatures should be mixed, the resultant temperature noted, and the units of heat gained and lost compared, and hence the capacity for heat of the calorimeter is found. Different substances having been heated to 100 degrees by placing them in a test-tube in the mouth of a flask containing boiling water, should be placed in water in the calorimeter, their heat capacity thus measured, and the equivalent mass of water determined directly by pouring in water at 100 degrees C. Pieces of dried ice should be placed in warm water, and steam passed into cold water, and the discovery made that heat is absorbed in producing changes of state. The terms "specific heat" and "latent heat" should be explained.

### 10. *Measurement of Vapour Pressure.*

Experiments should be made on evaporation by finding the loss of weight from a dish of water day by day, and the daily changes in weight of a bag of seaweed or a flannel roll.

Observations should be made on condensation of vapour, on the distillation of water and of mixed liquids, and on the use of the wet and dry bulb thermometer.

### 11. *Measurement of Force in lbs. or grams weight, and their Graphic Representation.*

The relation between tension and extension should be discovered by stretching an india-rubber cord, and a spring-balance should be graduated.

### 12. *Resolution of Forces.*

Resultant and components: Parallelogram of forces. Experiments should be performed with the aid of a board provided with pulleys, having cords passing over them knotted at one end, and having weights on the other. The direction of the cords should be marked off on drawing-paper placed behind them. All exercises should be worked practically in this way as well as graphically.

### 13. *Equilibrium of Three Forces.*

Triangle of forces. Experiments should be performed with the board mentioned in 12, using three weights and cords. The magnitude of the



weights may be given or the directions of the cords. Numerous experiments should be performed on triangle of forces, as with model of crane, where jib and tie are fitted with spring balances, two strings attached to balances and tied to a weight, the angle between the strings being varied, simple roof truss, etc. The extension of this principle to the pull in a cord having a number of weights attached at different points, and the two ends fixed to a bench and with spring balances between the weights, should be shown thus, introducing the "funicular polygon."

#### 14. *Equilibrium of Four or more Forces.*

Polygon of forces. This is a natural extension of the last-named principle, and is worked experimentally in the same way. The model of the crane is used with the chain dividing the angle between the jib and tie.

#### 15. *Parallel Forces.*

Reaction at support of beams. The principle of the funicular polygon should be applied to finding the resultant of a number of parallel forces, or the resolution of a single force into two parallel forces as at the supports of a beam. Experiments to illustrate the first of these can be performed with a lever supported on or by a spring balance, and with weights attached at different distances, and with the second by a lever suspended by spring balances at each end, and with a movable weight. All experiments should be verified by a graphic construction.

#### 16. *Centre of Gravity.*

Experiments should be performed in balancing rods, and circular, triangular, and irregular plates of wood or cardboard. Triangular plates should be suspended by a string from each corner and the intersection of the strings shown to be the balancing point. Pieces of wood-board shaped to triangles, parallelograms, etc., should be placed on a board, and the effect of inclining this ascertained. Similar experiments should be made with oblong blocks of wood, cylinders, and cones. In this way the student should discover the position and properties of the centre of gravity.

#### 17. *Principle of Moments, Levers.*

Meaning and use of moment. Numerous experiments can be performed on wood levers, divided along one edge into inches, and having a simple movable or fixed knife edge to form a fulcrum. Weights can be attached by strings. A bell crank lever can be made with a spring balance at end of short arm, the long arm being graduated for weights at different distances from the fulcrum. The student should discover and prove the principle of moments, with varying loads and distances and with the different levers, firstly neglecting the weight of levers, and then by considering their weight.

#### 18. *Simple Machines.*

Principle of work. Units of work. Meaning and use of words "agent," "energy," "power," "machine." Simple machines, as pulley blocks (one, two, or three sheaves), differential chain pulley, screw jack, wheel and axle, windlass, can be fitted up to permit of raising load by weights (called the power) placed in an axle pan. The velocity ratio of each machine should be found by actually measuring the distance moved by the power and load, and this should be done several times and in different ways. The power required to overcome different loads should then be found by experiment, and the mechanical advantage and efficiency of the machines should be calculated. The results should be plotted upon squared paper in the form of curves.



# ELEMENTARY CHEMISTRY.

## SYNOPSIS.

1. The object of the course of instruction indicated in this Syllabus is to impart, not only information, but chiefly the knowledge of method.
2. It involves the study of :
  - Air and nitrogen.
  - Combustion and oxygen.
  - Hydrogen and water.
  - Chalk and lime.
  - Carbon, and its importance in organic substances.
3. The practical work consists in accurately describing given substances, and in quantitative experiments on the following subjects :
  - (a) The alteration in weight of substances on heating.
  - (b) The measurement of the volume and weight of gases given off on dissolving substances in an acid, or on heating.
  - (c) The production of crystallised substances, and the estimation of water of crystallisation.
  - (d) The weight of carbon dioxide, and of water produced by burning organic compounds.
  - (e) Volumetric experiments in alkalimetry without the use of formulæ.
  - (f) The volumetric measurement of chalk in water.
4. All formulæ and equations, all ideas of molecules and atomic weights are avoided in this course, and chemical names are only introduced in proportion as their meaning can be established.

## SYLLABUS.

*While the main object of the course should be to train students to solve simple problems by experiment—to work accurately and with a clearly defined purpose, and to reason from observation—the instruction given should eventually lead them to comprehend the nature of air, water, "fire," earth, and food.*

1. Candidates should be made familiar with most of the common substances occurring naturally (such as sand, flint, and quartz, chalk, limestone and calc spar, clay and slate, gypsum, galena, hematite, and clay iron ore, iron pyrites, tin stone), and with the various metals and other substances in common use (such as the common acids, soda, salt, alum, whitening, lime, sulphur, sugar, starch, fats, oils, bone, different woods, charcoal, coke, alcohol, turpentine, &c.).
2. They should be able to describe the appearance and other obvious properties of such substances, and, in the case of many, to state what they are principally used for, and to give some account of their origin; they should know if anything, and what obviously, happens to those with which they are most familiar under ordinary conditions in contact with air or water or when burnt, and be able to describe what happens in ordinary language without, however, attempting to give any chemical explanation.
3. They should have determined the relative density of most of the substances mentioned.
4. They should have examined their behaviour with water and other liquids, including acids, and have learnt how substances such as salt, soda, and alum can be crystallised from water.
5. Different natural waters should have been evaporated and the presence of dissolved solid matter ascertained, and its amount. Purified water should have been prepared by distillation. The appearance of air bubbles on heating water should have been noted and the amount of "air" dissolved in water approximately determined.

6. They should have made simple *quantitative* experiments on the behaviour of typical organic, mineral and metallic substances when burnt or strongly heated.

7. The study of changes such as attend the rusting of iron and the burning of ordinary combustibles should then have been entered on, and a series of experiments made whereby they had been led to *discover* that the air is concerned in such changes, but not as a whole—that, in fact, it contains an active constituent; the extent to which this constituent is present should have been determined, and they should have been led to appreciate the *general nature* of the changes which attend its withdrawal. Attention should have been directed to the character of the products, to the resemblance which many of them bear to earths, and to their behaviour towards water, acids, etc. In some cases, *e.g.*, copper and lead, they should have ascertained the extent to which the active constituent of air is fixed when the substance is burnt, thus becoming familiar with the existence of *compound* substances formed from *definite* proportions of substances differing altogether from them in properties.

8. Attention having been called to the production in large quantities of the substances formed on burning various metals (iron scale, copper scale, litharge, red lead, zinc white), the attempt should be made to separate the active constituent of air known to be present in these by strongly heating them, such attempt being based on the previous observation that some earthy substances (*e.g.*, chalk) lose in weight when strongly heated.

9. It having been previously observed that when metals such as iron and zinc dissolve in acids, a gas is given off which burns, this gas should now be studied with the object of finding out what happens when it burns. Having ascertained that it affords a liquid when burnt, they should have compared this liquid with water—which it resembles in obvious properties—by ascertaining its density, freezing-point and boiling-point. Having thus discovered that water is formed on burning the gas in question, they should have been led to discover that oxygen is also concerned in its formation, and to produce it from oxides such as those of lead and copper. They should then have made *quantitative* experiments from which they could infer the composition of water by weight. The properties of water should have been contrasted with those of its components, and the production of heat as a consequence of the association of the two gases, and in other cases of association consequent on and attending burning, should have been thoroughly grasped—in fact, at this stage, a full general understanding of the nature of combustion should have been arrived at, and the evolution of a definite amount of heat, as a consequence of the formation of a definite amount of the compound substance, should have been made thoroughly clear to them.

10. Passing next to the study of earthy substances, chalk should have been chosen for examination, on account of its resemblance to substances formed on burning metals, such as zinc, etc., in air. It should have been carefully contrasted with lime, to bring out the fact that it is profoundly changed when burnt. The conversion into lime should have been studied quantitatively. Its behaviour towards acids should then have been examined and the discovery made that the gas which escapes is equal in amount to the loss which it suffers when burnt to lime; this being suggestive of the conclusion that “chalk-stuff” is composed of “lime-stuff” and the gas in question; experiments should have been made to reproduce chalk-stuff from lime-stuff and the gas. The discovery of the composition of chalk-stuff in this manner should also involve the accidental discovery of the formation of chalk-stuff on exposure of lime-water to air, and the consequent discovery of the presence of “chalk-stuff gas” in air.

Similar experiments should have been made with washing soda, involving the discovery that it contains water of crystallisation, and that it resembles chalk-stuff in composition. The definite manner in which it acts on acids should have been established by titration experiments, its use in softening water should also be referred to and examined into, and experiments made to determine hardness by soap solution.

11. Attention should then have been directed to the study of common



organic materials—sugar, starch, gluten (from flour), and white of egg being taken as typical examples. The presence of “coal-stuff” or carbon in all of these having been inferred from their behaviour when incompletely burnt, the presence of hydrogen and oxygen will be indicated by their yielding water when destructively distilled.

12. The formation on burning carbon of the gas previously obtained from chalk and found in the air having been discovered by experiments in which carbon had been burnt in oxygen, and the product compared with the gases previously studied, its production from carbonaceous substances generally should have been observed. The composition of the gas should have been ascertained. The conversion of sugar entirely into this gas and water on combustion having been demonstrated, albumenoid substances should have been burnt and the discovery made of the presence in them of nitrogen in addition.

#### EXPERIMENTS TO BE CARRIED OUT.

1, 2, and 3. Examination of common substances by the eye, and by simple tests requiring nothing more than very ordinary appliances—*e.g.*, scratching, powdering, or hammering, wetting with water—and determination of simple physical constants, as density, boiling-point, etc. (Great importance should be attached by the examiner to ability to satisfactorily examine and describe substances—and this should be tested practically.)

4. Behaviour of common substances towards common liquids, *e.g.* water, spirit, turpentine, dilute acids. (Such experiments may well be carried out with drops of liquid on watch glasses.)

5. Discovery of dissolved matter (solid) in natural waters. Distillation of water and other liquids. Collection of air given off on boiling water (by filling a two-gallon tin can provided with a delivery tube with water, and heating, etc.).

6. Effect of heat on substances generally. (Common substances, *other than metals*, should be heated on platinum foil. Pieces of metals may be held in a flame or supported on charcoal, and organic substances may be held by a platinum wire.) The amount of ashes given by a few combustible organic substances—a dried vegetable, wheat, dried meat, and bone. Substances such as sand, chalk, etc., should be heated strongly in porcelain crucibles, and any change in weight ascertained. Weighed quantities of several metals—*e.g.*, copper, lead, and silver—should be heated in clay dishes (such as are made by Morgan and Co., of Battersea) if possible, in a muffle furnace, or over a blow-pipe flame, and any alteration in weight, appearance, etc., noted.

7. Discovery that air is concerned in common changes, such as the rusting of iron, combustion, etc., and that its activity is due to one constituent. The proposal having been made to study the rusting of iron as an instance of a change of very common occurrence, a careful comparison should be made between iron and iron rust, including the determination of their relative densities, as it is noteworthy that rust is apparently a light substance in comparison with iron. It being found that rust is considerably less dense than iron, in answer to the question, What does this suggest? it may be said that perhaps the iron loses something in rusting. The following are then appropriate experiments:—

- a. A weighed quantity of iron borings, or turnings, or small French nails, is wetted, allowed to rust, dried and weighed; the mass is then broken up, wetted, exposed, dried, and again weighed, this being done several times.
- b. Clean French nails are corked up in a medicine bottle full of recently boiled distilled water.
- c. A muslin bag full of iron borings is exposed in air over water, this experiment being made several times.



- d. Iron (coarse powder or bright fine wire) is strongly heated in a tube through which air is passed, and any alteration in weight ascertained.
  - e. Fine copper wire is similarly treated, a comparison experiment being made in which the copper is heated inside a sealed tube.
  - f. A candle is burnt in air over water, then a jet of gas, a spirit or petroleum lamp, sulphur, and phosphorus.
  - g. Phosphorus is burnt on a tile under a shade.
  - h. A small piece of carefully dried phosphorus is burnt inside a dry Florence flask full of air shut in by a rubber stopper; the flask is subsequently opened under water, and the amount of water which enters is measured and compared with that which the flask will hold. The results of several such experiments are compared. By weighing the flask both before and after burning the phosphorus proof is obtained that the heat which escapes is immaterial.
  - i. A small stick of phosphorus is exposed in air over water. Iron turnings are subsequently exposed in the residual air from this experiment, and phosphorus in like manner in the residual air from experiment e.
  - k. Phosphorus is placed near to the end of a short tube packed with asbestos, and, the tube having been weighed, air is slowly drawn through the tube and the phosphorus fired; care must be taken to prevent the escape of fume. When the phosphorus is burnt out the tube is allowed to cool, and is then weighed.
- N.B.—The tube should be about  $\frac{3}{8}$  in. wide and 6 in. long, drawn out at one end. Fibrous asbestos is carefully pushed in to form a respirator, then a piece of phosphorus, and then a  $\frac{1}{2}$  in. plug of asbestos. The air is sucked through by means of an aspirator with a screw clip, and it is well to insert a wash bottle between it and the tube.
- l. The gas left on allowing iron to rust in air is passed over heated copper.
  - m. The extent to which finely divided copper increases in weight when fully burnt is determined.

8. The various solids obtained by burning metals (magnesium, zinc, lead, iron), in air—their appearance—their production on a large scale—special behaviour of lead; litharge and red lead, how produced and converted into each other; their behaviour when heated strongly tested by the balance; separation of gas on heating red lead; discovery that this gas supports combustion, and that it acts on copper as air does. Reproduction of air on mixing this active gas with the inactive gas (nitrogen) left on exposure of iron in air. Formation of an acid solution when the solid formed on burning phosphorus is dissolved in water—explanation of the name oxygen. Preparation of oxygen from potassium chlorate; combustion of various substances in it.

9. Dissolution of magnesium, zinc, and iron by diluted muriatic acid or oil of vitriol—the amount of gas given off on dissolving known weights of magnesium and zinc—the amount of zinc dissolved by a known weight of acid—the amount of salt formed. Combustion of the gas—the formation of a condensible product of combustion—collection of the liquid (the gas may be burnt from a small platinum jet close underneath a Florence flask or retort, through which cold water is slowly circulated, so arranged that as the water condenses on the flask it drops off into a small beaker)—comparison of its properties with those of water (*i.e.*, melting-point of solid into which it is converted by freezing and its boiling-point), and its consequent identification as water. Hence the name hydrogen. Combustibility of hydrogen in oxygen, but not in nitrogen—withdrawal of oxygen from red lead and copper oxide by hydrogen and formation of water—the amount of water formed from a given weight of copper oxide. The obvious properties of water and of the other oxides studied in comparison with those of their constituents. The explanation of combustion afforded by the foregoing experiments.

10. Comparison of chalk (whitening) with lime—slaking of lime—determination of the increase in weight—solubility of chalk and lime; preparation of lime water. Loss in weight when chalk is strongly heated—quantities of about a grain may without difficulty be “burnt” in a small porcelain crucible over a good Fletcher burner, and still more easily over a blow-pipe flame—a French petroleum blow-pipe burner is sold by Townson and Mercer which is admirably adapted for this experiment—or in a muffle. Action of acids on chalk—the gas incombustible—measurement of the amount given off—comparison of its density with that of hydrogen, oxygen, and nitrogen—determination of the weight given off on dissolving chalk in acids. Exposure of lime in atmosphere of gas from chalk and acid—its reconversion into chalk-stuff established by the behaviour of the product to acids, the change in weight which attends the conversion, and by the behaviour of the product on ignition. Examination of the solid formed on exposing a considerable quantity of lime water to the air—*e.g.*, its behaviour towards acids, determination of the extent to which it loses on ignition, and of the amount of gas evolved on dissolving it.

Examination of washing soda—conversion of the clear crystal into a white powder—the loss in weight attending this change—reconversion of the white powder into clear crystals by crystallisation from water—separation of liquid from the crystals by distillation, and its identification as water.

Action of acids on soda—examination and identification of the gas—the amount given off—titration of soda solution by acid solutions and discovery of the definite character of the action—separation of product from solution by crystallisation—the weight of product formed. Production of chalk-stuff on adding soda solution to lime-water or to solution prepared from chalk and an acid proved by carefully comparing the product with chalk-stuff. Presence of chalk in natural waters—its deposition on boiling—effect of adding soap solution to lime-water—measurement of the amount of soap solution required to produce a permanent lather in distilled water and natural waters before and after boiling.

11. Examination of vegetable and animal food materials, as indicated in syllabus—separation of liquid by carefully heating sugar, etc., in test tube provided with delivery tube, and its identification as water. Combustion of carbon, and of (a) paraffin, (b) sugar, as examples of compounds of carbon and hydrogen, and of carbon, hydrogen, and oxygen—proof that only water and carbonic acid are formed on burning sugar with copper oxide in a tube from which the air has been displaced by carbon dioxide having been given, the production of nitrogen on burning animal matter will be easily made clear.

## APPENDIX B.

### BOTANY.

The questions set will be based on the assumption that the main object of the instruction has been to lead students to find out by their own observation the most important obvious facts relating to the nature and growth of plants, and to treat their study as that of living objects.

#### INTRODUCTORY COURSE.

1. Students should be led to take particular notice of the commoner herbs, shrubs, and trees, which they may have the opportunity of seeing, and to describe them in ordinary language.

2. They should be induced to collect leaves and to carefully compare their shape, colour, markings, and other characters, to measure them



and trace their outline on paper, as well as make coloured drawings of them. The different ways in which leaves are attached, the scars left on falling, and the buds in the axils should also be noted. (Dried specimens of different leaves should be mounted in the note-books.)

3. They should be led to note in a diary kept for the purpose when different plants, shrubs, and trees put forth and lose their leaves, and when flowering takes place.

4. Whenever possible they should note the situation in which different plants and trees grow; also the influence of situation on growth and time of flowering, and the existence of evergreens as distinct from not evergreens.

5. *In the case of trees* they should be led to note the great difference in shape, due to the different arrangement of the branches, especially evident when they are without leaves, which makes trees good objects of study in the winter. The barks of different trees should be noticed and compared. (Such instruction is much facilitated by showing photographs and lantern slides of common trees; and children may with great advantage be led to illustrate the descriptions in their note-books by blue prints which they have themselves made from paper negatives.)

6. A number of stems should be examined, and the leaf scars and nodes noted, as also the difference in the length of the internodes.

7. The parts of a big bud such as that of the horse-chestnut having been made out, the presence in a bulb (hyacinth) of essentially similar parts should be noticed; and it should be recognised that in tubers such as that of the potato the eyes are the buds. The gradual growth of buds as also of the hyacinth and potato should be watched in order that the resemblance they bear to each other may be discovered.

8. Attention should be directed to the use made of different kinds of wood—and by cutting pieces of such wood with a pocket-knife, boring holes in them, weighing and measuring regular slabs, and so ascertaining the weights per cubic centimetre or cubic inch (use may be made of such data in framing arithmetical exercises, *e.g.*, calculations of the weight of planks of different sizes, floors, etc.), and carefully describing their appearance; students should be led to correlate their use for certain purposes with their properties. (It should be noted that herbaceous flowering plants have wood too, although very little; and that wood consists of nothing but pipes such as are met with in veins of leaves, stems, etc.)

9. Weighed quantities of sawdust or chips from different wood should be dried in the water oven and the loss on drying ascertained, and should then be burnt and the amount of ashes noted (this would be part of the Chemistry course).

10. The effect on the growth of trees and other plants of crowding together should be noted whenever opportunity offers in the case of trees, and should be ascertained by trial with some suitable garden plant. Students should be led to inquire why this is the case.

11. *In the case of leaves* students should be led to realise that the leaf is but the flattened-out growth of the stem, as is especially evident in the lettuce and cabbage.

12. That however varied in shape, leaves are ordinarily flat, thin, veined, and green—they should be led to inquire why.

13. That the veins act partly as supports, as do the ribs of an umbrella, which is particularly obvious when skeleton leaves are prepared with the aid of a solution of bleaching powder.

14. That the veins also act as pipes.

15. That the leaves are built up of cells.

16. That there are openings (stomata) in the surface layer of cells leading into the interior of the leaf. (The injection of fluid or the expulsion of air may be observed by dipping leaves—*Ranunculus ficaria* or an onion leaf—into water and blowing or sucking.)

(Conclusions 14, 15 and 16 should be arrived at by students from their own observation with a microscope or hand lens.)



17. Fresh leaves should be put on the balance and counterpoised and the fact demonstrated that they grow lighter as water is lost; they should also be dried in the water-oven, and the amount of water lost ascertained; the dried leaves should then be burnt, and the amount of ashes they yield ascertained.

18. *By observing roots*, they should be led to see that they offer a large surface and many points of attachment, this being enforced by setting them to measure and estimate the total length of the roots of some common plant, such as geranium.

19. That the roots are covered with root hairs, which still further increase their power of coming into contact with the moist soil in every direction. By experiments with cuttings (geranium, etc.) they should be led to discover that until new roots are formed, the cuttings cannot become plants capable of independent life.

20. That roots are cylindrical—firm and slippery at their tips, and that they therefore penetrate easily.

21. That the tips are provided with protective caps, which gives them still greater power of penetration.

22. *By observing a few common flowers*, they should be led to notice the difference between corresponding parts.

23. To realise that the calyx has a protective office.

24. That the corolla plays the part of a coloured banner, being attractive.

25. That all stamens bear pollen.

26. That although pollen is often found on the pistil, it does not bear pollen, and the seeds develop from within it.

27. A considerable number of common fruits and seeds should be studied (such as acorn, chestnut, bean, pea, wheat, barley, oat, tropæolum, onion, date, cucumber, castor-oil, sunflower); their appearance should be noted and described, and their average weights ascertained.

#### VEGETABLE PHYSIOLOGY.

1. GERMINATION.—Why do seeds “germinate” when sown in the ground; in what way are the conditions under which such seeds are placed different from those under which unsown seeds are placed? The answer to such a question would suggest that the following experiments should be made to solve this problem; that four parcels of seed, barley or mustard, for example, should be kept (in a sufficiently warm place) close together, one of them (a) dry and exposed to light, another (b) also dry, but covered over so as to be in the dark; the remaining two, after thorough soaking in water, to be kept on muslin just above water, (c) being exposed to light, (d) being covered over.

2. Why do seeds germinate quickly at one time of the year and not at another? Comparative experiments on germination should be made in and out of doors in cold weather to answer such a question as this. Experiments should also be made, if possible, at somewhat high temperatures, so that it might be discovered that there is an upper limit of temperature as well as a lower one.

3. The shrunken appearance of germinated seeds having been noted, a weighed quantity of seed (barley) should be allowed to germinate until the young plant is an inch or so high, and the germinated grain should then be dried in the water oven and weighed. Similar experiments might be made with potato tubers.

4. The result should suggest the question—What has become of a portion of the seed? The student would know from the chemistry lessons that seeds consist of carbonaceous combustible matter, and that in changes which take place in the air the air is very frequently concerned, and would, therefore, be prepared to expect the formation of the gas which is produced on burning carbonaceous matter. An experiment should, therefore, be made to ascertain if such is the case.

5. A further experiment should then be made in which seeds are allowed to germinate in air confined over water, in order to ascertain if air is concerned in germination.

6. The results of 4 and 5 should serve to suggest the question whether, as in burning carbonaceous materials, heat is not given out during germination. To test this a handful of steeped barley should be allowed to germinate (in a wooden box provided with a muslin bottom so as to allow air to penetrate), a clinical thermometer being placed within the mass and another near to the box to indicate the external temperature.

7. Attention should be directed to the difference in taste between germinated and ungerminated barley, and to the change which a potato undergoes during germination, and the question asked—what the difference suggested.

8. An account should be given of the production of malt on a large scale, and of the use made of it by the brewer. The changes which go on should then be investigated.

9. Weighed quantities of finely crushed barley and malt having been dried in the water oven, and the amount of water lost ascertained, part weighed quantities should be mixed, each with about twenty times its weight of water; the mixtures should be frequently shaken or stirred, and after about        hours should be filtered. After once washing the residues they should be dried and weighed.

10. The question would then arise—What was dissolved? The presence of starch in raw grain should then be discovered by kneading flour in water, and the starch should be separated, and its conversion into a paste and its behaviour with iodine observed.

11. The taste of the extract from the malt having been noted, its behaviour to an alkaline cupric solution in comparison with that of starch should be studied.

12. Attention should then be directed to the fact that the brewer at first digests the malt with warm water, and only boils the liquid after some time; and this should suggest the experiment of trying the effect of boiling water on the malt. It would thus be discovered that the conversion of the starch into sugar takes place to a large extent gradually, on digesting the malt with water; that therefore something is formed during germination which makes starch soluble by converting it into sugar. This should suggest the experiment of adding some cold water malt extract to a thick starch paste or potato mash, and noting the gradual change in the behaviour of the mixture to iodine. A similar experiment might then be made, using a portion of the same malt extract, but boiling it before mixing it with a starch.

13. GROWTH OF PLANTS.—Attention having been directed to the size of a plant in comparison with that of the seed from which it grew, and to the production of many seeds from one, the changes which attend growth should be followed. The growth of several quick-growing common plants (cress, tropæolum, barley, pea) should be carefully watched and measurements made, and every detail recorded. Finally the weight of produce—of root, stem, and stalk, leaf, and seed—should be ascertained, then the weight of dry matter, and lastly the amount of ashes. (A careful distinction should be made between "growth" and "nutrition"; the seedling grows in the dark, and at the end weighs less than the original seed, whilst a leaf may cease to grow and yet be capable of providing good substance for nutrition long afterwards.)

14. Then the question would arise—Whence does the increase come? It is easy to understand that the mineral matter (obtained as ashes on burning vegetable matter) comes from the soil; but does the combustible carbonaceous matter? Does the soil contain carbonaceous matter? Experiment shows that it does. Is this necessary, however, to the growth of plants? Experiments are therefore made to grow plants in water and wet sand, free from carbonaceous matter.

15. The results suggest that the carbon may be derived from the air which is known to contain the gas formed on burning carbonaceous matter. Experiments to confirm this conclusion should be made.



16. Attention having been called to the recognised importance of light to plants, the effect of light should be studied by observing the difference between portions of plants exposed to light and portions protected from light, as in the case of celery, endive, etc., and experiments should be made. In like manner the difference between the growth of the hyacinth and potato in the dark and in the light should be studied.

17. The presence of starch in leaves having been demonstrated, the influence of light on its formation may be studied by covering up portions of leaves.

18. Experiments to test the connection between the formation of starch and the presence of carbon dioxide may be made by growing plants in vessels containing, and free from, this gas, and ascertaining whether starch is found. The evolution of oxygen should also be demonstrated.

19. Special experiments should be made to show the importance of water to plants, and the importance of salts should be illustrated by a few simple sand-culture experiments.

20. *Yeast moulds and fungi.* Attention having been directed to the use made of yeast by brewers, its action on sugar solutions should be studied. Its mode of growth should also be investigated, and the importance of certain food materials, including salts, should be fully recognised. Moulds and fungi should also be examined, so that a *general* idea of their nature, of the conditions under which they can live, and of the *general* character of the effects they produce may be gained. Their destruction ("sterilisation") by heat should be studied, and the application of knowledge so gained to household economy (preservation of food) should be insisted on.

By experiments such as suggested the student should have been led to realise that the plant is *alive*, inasmuch as (a) it respire oxygen, (b) it feeds, (c) it grows, (d) it moves (apparent on watching tendrils and coiling of nasturtium petioles), (e) it responds to stimuli (as shown by heliotropic and geotropic movements and the behaviour of the sensitive plant), and (f) reproduces its kind through seeds.

At the close of such a course, moreover, there would be full opportunity of making clear the cycle of change from the mineral to the organic and back to the mineral, through which the study of plant-life carries us; of their dependence on the sun's energy, and hence of the important office they hold in the economy of nature in handing on the sun's energy.

21. In order to lay the foundation for the future study of systematic botany—to encourage the systematic comparison of likenesses and differences, to familiarise students with the relative values of the differences which are manifest in comparing plants, and to lead them to understand how a short summary of the characteristic features of a family or group of related plants may be given—students should be led to compare flowers—such for example as the buttercup, primrose and willow, and to point out in what respects they are alike, and in what other they are different. They should then, in like manner, be led to examine and compare other typical flowers—such as the wallflower, laburnum, hedge-parsley, dead-nettle, foxglove, dandelion, daisy, hyacinth, orchid, grass.



## APPENDIX C.

THE METHOD ADOPTED BY MESSRS. GORDON AND HELLER IN GIVING  
INSTRUCTION IN ELEMENTARY SCHOOLS.

The demonstrator usually made one visit to a school per fortnight, and gave one lesson of three-quarters of an hour duration to each of Standards V., VI., and VII., or to whatever Standards there were in the school.

The schools visited may be divided into two classes: first, those in which the assistant teachers had been through a course of training at Berners Street, and secondly, those in which the teachers were beginning the subject (Course 4) without previous knowledge of the methods to be used.

In the case of those of the former class the demonstrator was free to teach the scholars alone, without considering the class teacher. The monitors of the class usually had charge of and were responsible for keeping the apparatus clean and in order. This was stored in a specially designed lecture table and cupboard combined, fitted with lead sinks and draining boards, divided drawers, etc., which cost nearly 10l.; in many cases, however, such a table was not provided, and the apparatus was kept in ordinary stock cupboards, the experimenting table being improvised by placing a black-board across two dual desks. In many cases a hinged flap table folding down against the wall was found most convenient for experimental work by the scholars.

The demonstrator usually spent a few minutes questioning the class as to the work accomplished during the previous fortnight, and dealt with the difficulties that had occurred, taking care to emphasise the exact position the experiments already made had left the scholars in; he then invited suggestions as to what would be the next point to elucidate. Very good suggestions were often made, but as a rule the class had to be led to the consideration of the next question to be answered. As soon as it was clearly understood what was to be the particular object of inquiry, two or four boys would get the apparatus out, fit it up, and make the necessary weighings. Perhaps other boys would carry through the experiment to the finish. There was seldom any necessity for the demonstrator to handle the apparatus at all, and the fact that the demonstration experiments were performed by the boys themselves ensured the closest attention of their fellows. A living interest in what was going on and a condition of enthusiasm was thus aroused, which was reflected in the whole subsequent work of the class. Between the demonstrator's fortnightly visits there were, as a rule, three intermediate lessons, which were utilised in repeating the last lesson, for back work and in writing up notes, but advantage was often taken of writing lessons and composition lessons for note-book work.

In many schools one or two experiments were kept always going on a table in a corner of the room, and a few boys—usually not more than four—were always engaged at experimental work, so that in the course of the fortnight every boy in the class would have performed the chief experiments connected with that portion of the work under consideration.

In the second class of school, in the case of a teacher unfamiliar with the work who was, perhaps, at first not willing to take the extra trouble involved in keeping the boys at experimental work, it often happened that the class lost interest and results were unsatisfactory.

Apparatus was supplied to the school at the beginning of the year's work, everything that was required for the work being provided and due allowance made for breakages. Did the occasion arise, apparatus was loaned from the central laboratory to schools likely to use it with advantage, so that work was never allowed to stand still for want of apparatus.

At annual inspections sufficient additional apparatus was sent to schools to enable fifty boys to be at work at once.

APPENDIX D.

IMPRESSIONS OF THREE YEARS' EXPERIENCE OF  
SCIENCE TEACHING IN EAST LONDON SCHOOLS.

BY W. MAYHOWE HELLER, B.Sc.

(Formerly Organising Teacher and Inspector of Science to the School Board for London; now Head Master, Municipal Technical Day School, Birmingham).

When at the invitation of the London School Board I resigned my position at King's College and became a "science demonstrator" under the Board, it was with some misgiving as to the outcome of the work I was about to undertake.

The inducements were mainly two, first, that the crusade to be carried on was of the same character as that in which I had been engaged in two secondary schools, though the difficulties and dangers were greater; secondly, that the brunt of the battle had been borne by my old friend and fellow student, Hugh Gordon, who had already broken down the first line of the enemy's defence. No one, perhaps, can realise better than myself the work that Mr. Gordon had had to do to produce the state of affairs existing at the time of my appointment as his successor. The success he achieved points a moral as to the future conduct of heuristic teaching in schools of every grade which my own experience abundantly confirms. The change in method must be sudden, complete, and revolutionary; no attempt must be made to gradually displace the old by the new, for in so doing both must inevitably become ineffective.

The old system of science teaching in London Board Schools, a three years' course of so-called mechanics, involved covering an extremely wide range, as it included elementary physics and chemistry in the first year, the laws of motion and of falling bodies in the second, and the mechanical powers and mechanics in the third. The first year's work would have been a useful and interesting course if it had been spread over three years, if it had been in logical order and if exact experiments had been introduced; as it existed it was merely an illustrated course of popular lectures of small educative value. The second year's course was well-nigh incomprehensible to boys of twelve, and the third year's work also involved mathematical knowledge far above the heads of the pupils who had to go through it.

With the exception of the lever and pulley, no experimental proof could be given of the laws involved in the last two years' work. The science demonstrator under these conditions went from school to school with a set of models intended more as a help to the imagination than as a means of discovering exact knowledge.

Mr. Gordon had dared to break through this time-honoured course, which was coming to be regarded as the only method of approaching science; he had introduced into some twelve schools



a course based on the reports of the British Association Committee, similar in aims and matter to that since adopted by the Incorporated Association of Head Masters, and had obtained a laboratory where a little band of enthusiastic teachers were initiated by him into the method of the new scheme.

The impossibility of teachers understanding heuristic methods without a fairly long course of laboratory training soon forced itself upon me, and I, therefore, made ready to deal with larger numbers at the Berners Street Laboratory, and to open the classes to women as well as to men. It usually took a year's attendance at these classes to make a teacher understand the new interpretation to be put upon science teaching, and it was more often than not three years before he could be considered as having fully grasped the possibilities. In the case of classes in charge of a teacher who had not been through these laboratory courses the demonstrator had more or less to talk at him through the class—a very difficult and disappointing method of training. I remember no instance of a teacher coping successfully with the work until he had attended at least one eight months' course at Berners Street.

It is needless to say the difficulty of teaching was found to increase very rapidly with the size of the class; when the number exceeded fifty it was next to impossible to do much good work. The continuous strain on a teacher for five and a-half hours a day with such classes does not leave him much energy or time for thought, both of which are absolutely essential to success. Everything depends on the personality of the teacher, and experience shows that there are comparatively few at present equal to the great demands that heuristic methods make upon them. But it is entirely a matter of training. Teachers must have the patience to wait for the slow but sure and persistent effects of heuristic teaching.

Whatever success was achieved was made so much the more easy by the enlightened and sympathetic consideration of Her Majesty's Inspectors and their staffs. They encouraged the teachers and the children to experiment by giving plenty of practical work at their annual inspections. On such days we often had as many as fifty children at experimental work at one time.

The necessary apparatus for these special days was supplied from the demonstrator's laboratory.

The classes at Berners Street for the teachers were held on four nights a week, each teacher attending on one night only. They came straight from their schools, and took tea at the laboratory; a short explanation of the work before them was first given, the particular points to be observed in its teaching, and a general discussion of the methods adopted. Each then settled down to practical work occupying some two hours.

Fortunately for the efficiency of this work a considerable number of friends were always ready to give their services as assistant demonstrators. Several teachers who had already been through the course gave up one or even two nights a week to



help their less experienced confrères. The older teachers and those with little previous scientific training were usually the most successful; those bristling with science certificates had usually a distaste for practical work and exactness, but were ultimately in most cases reduced to a state of scientific humility. I may say that smoking was not prohibited at the classes for men.

The gradual awakening of interest, and the improvement in the intelligence of the classes under their control was a continual vindication of the efficacy of the system.

Almost immediately after my appointment, Mr. Henry Hulland, headmaster of a mixed school in Hackney, asked me to do something for the girls in his school in the way of experimental work touching Domestic Economy. Delighted with the opportunity of breaking through the ice that had hitherto excluded science from girls' schools, I formulated a scheme of Domestic Science now incorporated in the Day School Code, and in much greater detail in the Evening Continuation School Code. Here the difficulty of getting women teachers to second one's efforts was enormous; their previous training told severely against them. There was a decided distaste at first to even handling apparatus, they wanted to be shown how to do it rather than *do* it, and, above all, were bored by the care and accuracy required for experimental work. There was a marked difference in these respects between the men and the women's classes, for the former very quickly appreciated and took pride in exactness. It may appear strange to some that the exact reverse was observed in comparing the work of boys and girls. Young girls make excellent and careful experimenters, quite devoid of the "bull in the china shop" method of a boy first set to handle delicate apparatus. But can we expect otherwise? The training of a woman teacher is didactic throughout; her own teaching, particularly of Domestic Economy, is bookish and dogmatic, and perhaps the only two subjects in the girl's school curriculum making for formation of habit are needlework and drawing, both essentially "doing" subjects. But how much inferior are either of these to logical experimental science or well systematised manual instruction.

The success of the instruction for girls which I endeavoured to introduce depended more on the teacher of the class than on any other consideration, and the teacher with genuine ability for the work was rare indeed. In one of the poorest schools in East London there was such an one, and in her hands magnificent results were achieved.

Each year's experience led one to cut more and more out of the syllabuses of work. The better a teacher became, the less ground he seemed able to cover, and many who had pronounced that the schemes had not enough in them, were afterwards the first to admit difficulty in getting through the work.

It must be fully recognised that these heuristic methods are difficult and tax the devotion and conscientiousness of a teacher to the utmost, and it is only the best teachers who will *with their present training* do justice to them.

Such pioneer work as that accomplished in the dingy little

headquarters in Whitechapel had many difficulties and more disappointments; but when one comes to recognise the change made during but six short years, we who have been most closely connected with it feel satisfied that all efforts have been repaid. Some four hundred teachers of both sexes went through the long course of training at Berners Street, and a goodly percentage of these became genuine teachers of scientific method, while the others, even if their opinions were not fully re-moulded, at any rate saw greater possibilities and higher ideals in the teaching of science than previously.

About forty schools in Tower Hamlets and Hackney have now adopted these special courses, the remaining schools in which science subjects are taught, teaching either mechanics, or chemistry, botany, or physiology on old lines.

Copies of opinions expressed by Professor Smithells (Professor of Chemistry) and Professor Miall, F.R.S. (Professor of Biology), of the Yorkshire College, Leeds:—

Professor Smithells wrote on January 22nd, 1896: "I have made three visits to East London expressly to see with my own eyes how the scheme of science teaching works, and have been fortunate in seeing it under various conditions. For the last ten years I have taken a very great interest in the school teaching of science, which, apart from its general educational importance, is of such special concern to those, like myself, who have to do with the higher ranges of science teaching. I consider that the scheme which is being carried out under the able guidance of Mr. Heller is better suited to its purpose than any other that I am acquainted with, and I can imagine no greater gain to the elementary education of this country than that which would ensue from the general adoption of the scheme in question."

Professor Miall wrote on January 23rd, 1896: "What I saw of the methods of science teaching practised under Mr. Heller's direction impressed me strongly and favourably. This is real science, and it will have its effect upon practice as well as upon the mental development of the children. The difficulties of the task have seemed at times to be overpowering, but I am persuaded that the right path has now been discovered. My idea of a course of instruction in elementary and secondary schools would be to occupy part of the early years with object lessons, then to lay a good foundation of arithmetic and mensuration, then to work through your course, which would be greatly lightened if the ground had been prepared for it. After this a youth would, I suppose, be fit to study science by means of lectures and laboratory work, either in school or college. Those who enjoy such advantages would enter upon practical life with a distinct and ineffaceable experience of scientific method. They would observe, measure, and reason in a different way for the future. I wish all success to your efforts, which are of national importance, and shall be glad if any words of mine can be helpful to you."

(Copy of a letter from Professor G. F. Fitzgerald, F.R.S., Trinity College, Dublin.)

Trinity College,  
Dublin,  
6th May, 1897.

DEAR MR. HELLER,

I have had a good opportunity of comparing the methods of science instruction in several different places in England during my recent visit to England in connection with the "Commission on Manual and Practical Instruction in Primary Schools in Ireland." I took a very keen interest in what I saw, and especially in your work in London. I have been most favourably impressed with the methods you are employing, and from



what I saw of its work in the schools am convinced that it is working out in practice what it is designed to do, and is capable of being introduced into any school by intelligent and well trained teachers.

Your methods are intelligible methods, and can consequently be made the basis of an intelligible system which can control all the methods of the teacher, and give him an intelligible clue for developing the methods to suit the varying circumstances of his school and locality. In that respect it seems to me to have an overwhelming advantage over, what I may describe as, the hand-to-mouth methods of others.

With the deliberate end in view of teaching children by a connected system of simply-graduated experiments to learn how to read nature, make her answer their questions, and thus provide themselves with the means of learning her laws, and how to control her for their advantage, you have a fundamental principle of true scientific education that puts the child in possession of the means of further advance, and is quite as essential to its well-being in life as to give it the ability to read.

Most other methods of scientific education are analogous to the aboriginal methods of literary education by teaching children to learn Homer by heart. So far it was of use, but when literature grew it was much more important to teach a child to read than to teach it almost anything by heart. Similarly, the really important thing in scientific education is to give a child the ability to read Nature and to understand her. The time has gone by for learning off all that is known about her.

The methods of experimental enquiry are themselves so very different from those of literary enquiry that they must be specially taught, and the methods of teaching them differ in so many important respects from the methods of teaching things that can be read about, that it is essential that the teachers of the methods of experimental enquiry (a much better general term than Physics, Chemistry, etc.), should have a special training.

This is all the more necessary at present when we are trying to change the system of scientific instruction from that into instruction in the methods of experimental enquiry, because so many of the teachers and of would-be teachers have already had wrong ideas implanted in them by being brought up in a very imperfect system.

At the same time that a practical training of teachers to these good ideals is so essential, the fact that an intelligible system and an intelligible end underlies your methods should ensure that your system and ideals could be grasped and worked out by any properly trained teacher.

I have been so fully impressed with the advantages and workability of your system that I shall use my endeavours to have this rational system introduced wherever practicable in our Irish schools, and feel no doubt that wherever any science education is practicable, your system, modified as to its details to suit localities, etc., but unmodified as to its ideals and essential methods, will be found by far the most practicable of any, and by far the most valuable as regards its results.

Yours very sincerely,

GEO. FRAS. FITZGERALD.



SUMMARY OF  
STATISTICS, REGULATIONS, &c.,  
OF  
ELEMENTARY EDUCATION  
IN  
ENGLAND AND WALES.  
1833—1870.

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## INTRODUCTORY.

The chief aim of this paper is to present in a handy form a summary of the statistics of English Elementary Education from 1833, when Government first undertook a direct share in the work of primary instruction, down to the passing of the Elementary Education Act, 1870. It supplements the paper by the same writers, which was published in the volume of Special Reports, 1896-7, on "Public Elementary Education in England and Wales, 1870-95." The two papers together will be found to furnish a statistical survey of the system of public elementary education in England and Wales during the sixty-two years following its first organic connexion with the central authority of the State. Besides statistical tables, there are included in this paper summaries of the salient conclusions of Parliamentary and other inquiries into public education, 1833-70; analyses of the chief Bills referring to elementary education, 1843-70; and extracts from the more important minutes and codes published by the Committee of Council on Education during the same period of years. We have also inserted, for purposes of convenient reference, brief analyses of parts of some important Parliamentary debates on elementary education during the years under review. We hope that the materials thus brought together may be found useful by the increasing number of students of the history and development of our system of public elementary education.

## i.

To an understanding of the history of Elementary Education in England and Wales, it is important to bear in mind that, in this country, the Reformation did not lead to the establishment of any national system of primary schools. We have nothing to look back upon really analogous to Luther's letter, "*An die Ratsherren aller Städte deutschen Landes dass sie christliche Schulen aufrichten und halten sollen*" (1524). Nor have we in our educational history the counterpart of John Knox and of the famous declaration in the "First Book of Discipline" (1560) in regard to "the virtuous education and godly upbringing of the youth of the realm." The idea that the elementary school is an essential part of the organisation of each local community did not take firm root in this country until the present century.

It had been hoped by many that, as an outcome of the Reformation, elementary education would be established as part of the normal duty of each parish under the supervision of the Church of England. Numerous injunctions to the clergy and churchwardens in the reigns of Edward VI. and Elizabeth, as well as the Canons of 1604, deal with the subject. Much was doubtless done, but religious and political dissensions prevented the work from becoming a truly national system,



The growth of the towns, however, and the moral evils which affected English life during the period immediately following the Restoration, increased the urgency of the problem of educational reform. Thus, Dr. Bray, in his original "Plan for the Constitution of a Protestant Congregation or Society for Propagating Christian Knowledge," had proposed that the members of the Society should, *inter alia*, "proceed to set up Catechetical Schools for the education of poor children in reading and writing, and more especially in the principles of the Christian Religion." The Society for the Promotion of Christian Knowledge, thus founded in 1698 through the labours of Dr. Bray and his friends, made from its first inception an organised effort to meet the educational needs of the poor in this country.\* The promotion of "that good Design of erecting Catechetical Schools in each parish in and about London" was the subject of the second resolution at the first meeting of the Society held on March 8, 1698<sup>8</sup>. The Society's first Circular Letter to their clergy correspondents in the several counties of England and Wales (considered at the meeting on Nov. 16, 1699) traced the cause of "the visible decay of religion in this kingdom, with the monstrous increase of Deism, Prophaneness and Vice," in great measure to the "barbarous ignorance observable among the common people, especially those of the poorer sort," and ascribed this to "want of due care in the education of Youth, who, if early instructed in the Principles of true Religion, seasoned with the knowledge of God, and a just concern for their everlasting welfare, could not possibly (with the ordinary Assistance of God's good Spirit) degenerate into such vile and unchristian practices as they now generally do." "To remedy these evils," therefore, "which cry aloud to Heaven for vengeance," the Society had "agreed to use their best endeavours to incline the hearts of generous and well-disposed persons to contribute towards the erecting of Schools in these Cities and the parts adjacent, for the instruction of such poor Children in Reading, Writing, and in the Catechism, whose Parents or Relations are not able to afford them the ordinary means of education; and, as they look upon this to be the most effectual method to train up the poorer sort in sobriety and y<sup>e</sup> knowledge of Christian Principles, so they assure themselves that the good effects which may be wrought thereby will prove a powerfull argument to engage others in better circumstances to make so necessary a provision for their children."

From these beginnings the Society laboured without intermission for the establishment of charity schools, the education given in which should be based on definite religious principles in accordance with the tenets of the Established Church. But the nation was itself divided in point of religious belief. Few, if any, entertained the idea that a purely secular education would remove the moral evils which the elementary schools were designed to eradicate. Hence, from the first,

\* Cp. *Two Hundred Years: The History of the Society for Promoting Christian Knowledge, 1698-1898*, by W. O. B. Allen and Edmund McClure, Secretaries of the Society (London, S.P.C.K., 1898), pp. 23, 135 *seq.*

there was no hope of unified (as distinguished from concerted) action among those who differed from one another on fundamental questions of belief. The passing of the Act of Uniformity in 1662 had been rather a fresh statutory recognition of those differences than in itself the cause of the divisions themselves. But, as regards Protestants of various shades, it had had the unhappy and far-reaching effect of emphasising the social separation of many who were one at heart, and might have been one in effort, in certain measures of social reform.

The Nonconformists were thus under grievous disabilities which, though mitigated in practice by the gradual advance of the principle of toleration, none the less embarrassed them seriously in their labours for the cause of public instruction. The time was not yet ripe for any general recognition by the State of the efforts of various denominations in the work of national education. In 1779, however, a Statute admitted dissenting ministers and tutors to the benefits of the Toleration Act, "without a subscription to the Articles, provided they declared themselves Christians and Protestants, and believers in the Old and New Testaments."\* But this relief was far from giving free scope to all the energies which would otherwise have been poured into the work of national education. To the growing strength of the Evangelical movement England owed the further efforts which were made by great numbers of devoted men and women to dispel the dark cloud of popular ignorance. In 1730, Griffith Jones started the system of "circulating schools" in Wales, and formed a body of schoolmasters who went round from place to place teaching adults to read the Bible in Welsh.† The Sunday School movement began in a scattered way, as one pioneer after another conceived the plan of doing something to promote religious education. Theophilus Lindsay, at Catterick, near Richmond in Yorkshire, about 1763; Hannah Ball, at High Wycombe, in 1769; Jenkin Morgan, at Crawlem, near Llanidloes, in 1770; James Hay, at Little Lever, near Bolton-le-Moors, in 1775; and David Simpson, at Macclesfield, in 1778; were amongst those who held Sunday classes, on lines not unlike those which had been adopted by John Wesley, at Savannah, as long before as 1737. But it was Robert Raikes, of Gloucester, who consolidated the Sunday School system in England by his labours beginning in 1780, and Thomas Charles, of Bala, who rendered the same service (from 1789 onwards) to education in Wales. All this work, and the deep motives of religious earnestness which inspired it, had a direct bearing on the growth of public sentiment in favour of a national system of education.‡

## ii.

To this we must add the democratic impulse, which began to be felt all over Western Europe and in America in the latter part of the last cen-

\* Lecky, "England in the Eighteenth Century," vol. iii., 502.

† *Ibid.*, vol. ii., 604.

‡ Cp. Mr. F. J. Hartley's paper on the "History and Statistics of the Sunday School," in the *Modern Sunday School* (Sunday School Union).



tury. The movement for public instruction became more and more the organised expression of a new form of public need. The significant warning of Adam Smith in 1776, that "an instructed and intelligent people are always more decent and orderly than an ignorant and stupid one," told upon large circles of responsible opinion, interested in the economic welfare of this country.\* Philanthropic effort, like that of the Society for Bettering the Condition of the Poor, of which Bishop Shute Barrington, of Durham, and Sir Thomas Bernard were leading members, more and more focussed itself on the problems of education.† And the Industrial Revolution, by the introduction of machinery and of the factory system, had shaken the old social foundation to its base. Traditional influences, which were educative in a true, howbeit narrow, sense, were disturbed. Masses of the people had flocked into the towns, or had formed new settlements which lacked municipal care and such order as is essential to healthy forms of urban life. The need for the civilising and refining influences of education thus became admittedly urgent.

Next, the labours of Dr. Bell, and of Dr. Lancaster, and of their respective coadjutors, began to bear fruit. The Royal Lancasterian Society, known afterwards as the British and Foreign School Society, was founded in 1808, and the National Society for the Education of the Poor in the principles of the Established Church, (an offshoot of the Society for Promoting Christian Knowledge) in 1811. The example of Scotland did not fail to exert a marked influence on English educational opinion. In 1807 Mr. Whitbread, member for Bedford, introduced into the House of Commons a large measure of Poor Law Reform, of which the educational provisions were an important part. The Bill did not pass, but its introduction did much to educate public opinion. Then followed the many-sided efforts of Lord Brougham, supported as he was by a large body of active workers, especially in the North of England. The diffusion of cheap literature extended the range of the educational movement. Mechanics' Institutes and reading rooms were established in large numbers, and, finally, the passing of the Reform Act of 1832 was a sign that some intervention by the State in the work of Public Education could not be long delayed.

### iii.

In 1833 the Government began its annual Parliamentary Grants. But, for some years, it confined itself to entrusting the expenditure of the subsidy to the two great educational societies—the National Society and the British and Foreign School Society—and assumed no direct responsibility for the actual efficiency of the aided schools. In 1839 the further step was taken of creating a Committee of the Privy Council to regulate the administration of the Government Grants to Education. The following words occur in the letter in which Lord John Russell communicated

\* *Wealth of Nations*, Bk. v., Chap. I, Art. ii.

† Cp. *Reports of the Society for Bettering the Condition and Increasing the Comforts of the Poor*, specially No. cxlviii.



to Lord Lansdowne Her Majesty's pleasure to create the Committee of Council on Education.

"Much may be effected by a temperate attention to the fair claims of the Established Church, and the religious freedom sanctioned by the law."

"On this subject I need only to say that it is Her Majesty's wish that the youth of this kingdom should be religiously brought up, and that the rights of conscience should be respected."

"It is some consolation to Her Majesty to perceive that, of late years, the zeal for popular education has increased, that the Established Church has made great efforts to promote the building of schools, and that the National and British and Foreign School Societies have actively endeavoured to stimulate the liberality of the benevolent and enlightened friends of general education."

"Still, much remains to be done; and among the chief defects yet subsisting may be reckoned the insufficient number of qualified schoolmasters; the imperfect method of teaching which prevails in, perhaps, the greater number of the schools; the absence of any sufficient inspection of the schools, and examination of the nature of the instruction given; the want of a Model School, which might serve for the example of those societies and committees, which anxiously seek to improve their own methods of teaching; and, finally, the neglect of this great subject among the enactments of our voluminous legislation."\*

The following pages contain extracts from the chief minutes issued by the Committee of Council (including those of August and December, 1846, which were of determinative importance to future policy), together with statistical tables and illustrative summaries. It is hoped that these may prove of use to those who are studying the details of the history of the system.† After the Minutes of 1846, the next most important event in the history of English Public Elementary Education, was the introduction of the Revised Code of 1861, which led to a great change in the administration of the system of awarding the annual grants. The new methods, then introduced, prevailed with more or less of modification down to the great alterations in the Code which began in 1890. In the sphere of local organisation, the determinative date was 1870, when Mr. Forster's Act established School Boards with rating powers.

\* Printed in *The School, in its relations to the State, the Church, and the Congregation* (Murray, 1847, pp. 9, 10). This pamphlet (written by Sir James Kay Shuttleworth) had a semi-official character.

† To those who are unfamiliar with the literature on the subject, it may be convenient to have the following brief list of some of the chief books dealing with the history of elementary education in England. Parliamentary papers are excluded, as a list of them was printed in the last Volume of these Reports (pp. 720 *seq.*). It may be mentioned, however, that there is a useful summary of the history in the Final Report of the Royal Commission on the Elementary Education Acts 1888 (C. 5485), pp. 2-44.

"The State and Education," by Sir Henry Craik, K.C.B. (Macmillan).

"The History of the Elementary School Contest in England," by Francis Adams (Chapman and Hall, 1882).

"Elementary Education, some account of its Rise and Progress in England," by Dr. Gregory, Dean of St. Paul's (National Society, 1895).

"The Schools for the People," by G. C. T. Bartley (Bell and Daldy, 1871):

"English National Education," by H. Holman (Blackie & Son, 1898).

"The Educational Systems of Great Britain and Ireland," by Graham Balfour (Oxford University Press, 1898).

## II.—SOME STATISTICS OF ELEMENTARY EDUCATION IN 1833.

At the outset of our enquiry we are confronted with the difficulty mentioned in the report of the Select Committee of the House of Commons in 1837, that "There appear to be no returns to Parliament of any authority on this point (the present state of education of the humbler classes), nor indeed are there at present adequate means of making them. The returns made to queries sent out by the Committee on Education in 1835 are found to be incorrect as well as defective." The inquiry to which these words apply commenced in 1833 and embraced *all* schools in England and Wales, so that it is impossible to separate accurately the schools attended by the children of the upper and middle classes from those attended by the children of the labouring classes. The following table and extracts from the report of this Parliamentary Enquiry of 1833, and from the report of an enquiry conducted by the National Society in 1831, may enable us, however, to give an idea of the number of schools and scholars in 1833.

The following table, on the "Maintenance of Schools," appeared in the summary to the Parliamentary Enquiry Report of 1833:—

Schools.	By Endowment.		By Subscription.		By Payment from Scholars.		Subscriptions and Payments from Scholars.	
	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.
Infant Schools -	30	1,450	197	13,081	2,350	40,721	408	33,753
Daily " -	4,076	152,314	2,632	165,436	26,791	691,728	2,487	178,464
Sunday " -	571	39,533	15,244	1,423,377	101	5,718	912	80,262
Totals - -	4,677	193,297	18,073	1,601,894	29,242	738,167	3,807	292,479

And the Committee remark on it as follows:—

"Difficulties have arisen which render the maintenance of schools incapable of exact classification, particularly where endowed schools are partly supported by funds other than those arising from the endowments, or (as sometimes occurs) where endowments are now appropriated in aid of the support of large schools upon the system of *mutual instruction*; wherefore the maintenance of schools, as shown in the

summary, must be regarded rather as an approximation than an exact account. In calculating the number of free schools and scholars, those schools which are partly supported by subscription in aid of payment by the parents of the children (such payment seldom exceeding 1d. or 2d. weekly), may perhaps be considered free schools, as well as those which are endowed, or entirely maintained by subscription. Reference to the general abstract will show that the majority of National and Lancasterian schools are maintained in this manner, and that of the 1,276,947 children under daily instruction, 544,498 are at Free Schools."

The National Society addressed, on 1st January, 1831, a circular to the clergy of the Established Church for the purpose of ascertaining the state and progress of Sunday and other Church of England Schools for the religious instruction of the poor throughout England and Wales.

"Circulars were sent out to every parish church and chapelry contained in the Clerical Directory, in number about 12,000. Of these 9,309 have made a return, and 7,225 possess some school. No returns were obtained from 2,013 places; 678 places (the difference between 9,309 + 2,013 and 12,000) having been struck out of the list, as containing for the most part very small populations, in no case amounting to 200 souls. On the whole, it appears that 9,309 places have made a return; that they contain 10,965 schools and 740,005 scholars; and 2,013 places (possessing each of them a population of above 200), have not made a return. If, therefore, a proportion is taken—viz., as 9,309 : 740,005 :: 2,013 : 160,020—the last term (160,020) will give the number of children in the places not reported on; and, as the first term contains all places which made a return (many of which possessed populations below 200), and such thinly inhabited places have been all excluded from the third term, it may be inferred, as a statement below the truth, that there are 11,352\* schools with 900,025 scholars at present in immediate connection with the Established Church, and under the superintendence of the clergy."

"The 10,965 schools which sent returns show the following results:—

—	Schools.	Scholars.		
		Boys.	Girls.	Total.
Sunday and Day	6,470	224,345	184,663	409,008
Sunday only, or additional	4,495	163,037	167,960	330,997
	10,965	387,382	352,623	740,005

"If we add the assumed number of children from the places not reported on, we shall get 497,458 children attending 7,869 day and Sunday schools, and 402,567 attending 5,467 Sunday schools only."

The first table and extract show that more than 540,000 children were

\* This is clearly a misprint. It should be 13,336 schools.



at Free Schools, but amongst these Free Schools are included the higher endowed collegiate and grammar schools which were attended by the children of the upper and middle classes. If we take 40,000 as the number of these children—and the number cannot be greater—there would remain half a million of children of the labouring classes who were attending school either as free scholars or by paying 1d. or 2d. weekly.

The second extract shows that over 400,000 children were actually attending the 6,470 day schools belonging to the National Society or the Church of England; or, if we include the places that made no returns, it was estimated that nearly 500,000 children were attending church schools. The National Society's report for 1835 gives the number of schools in connection with the Society as 3,861 day schools with 324,045 scholars. In addition to these there would be the Church schools unconnected with the Society, and as the difference between 7,869 and 3,861 is over 4,000, they might certainly contain 150,000 children.

The schools connected with the British and Foreign School Society, the Congregationalists, the Wesleyan Methodists, the Roman Catholics, and other religious bodies have also to be taken into account, and a low estimate would place this number at about 950 with over 60,000 scholars; so that altogether the half a million of children mentioned above as free scholars is certainly not too high an estimate. The 950 schools with 60,000 scholars belonging to the religious bodies other than the Church of England are thus obtained:—In the census returns for 1851 are given the dates at which the then existing schools were founded or erected, and we find that there were, in 1851, 3,076 schools belonging to religious bodies which were founded or erected before 1832, in addition to 498 whose dates are not given. Of these 3,076, 2,712 belonged to the Church of England, and 364 to the other religious bodies, or, if we add those where the dates are not given, 3,121 belonged to the Church of England and 453 to the other religious bodies. The 6,470 Church of England schools known to have been in existence in 1831 had become 3,121 in 1851. "Some, no doubt, which were in operation formerly, have since become extinct; and many more have been enlarged, or superseded by new buildings, and most probably when this has been the case, the *later* date has been the one supplied." We may, therefore, conclude that a similar process had been going on with all schools, and the 453 schools belonging to the other religious bodies in 1851 were the remains of a larger number existing in 1831. Proportionate to the known Church of England schools, they would be (3,121 : 453 :: 6,470 : 939) 939, or to the estimated Church of England schools (3,121 : 453 :: 7,869 : 1,142) 1,142. Taking the lesser number, 939, and allowing an average to each school equal to that in the known Church of England schools—i.e., 63—and the number would probably be greater, as more Church schools would be found in the smallest villages—we have still over 59,000 children attending

schools other than those belonging to the Church of England. In the 1,142 there would on the same basis be over 70,000 children, but probably the former number is more correct, or we may consider that 950 schools with 60,000 children would allow for a slight increase on the former numbers. It was unfortunate that in 1833, "except in regard to the metropolis, no returns have been obtained of the number of children receiving education in the schools connected with the British and Foreign School Society."

In 1851 the number of scholars of the upper and middle classes who attended endowed schools was estimated at not more than 50,000, *i.e.*, not 3 per cent. of the population. The collegiate and grammar schools, to the number of 566, were attended by 35,612 scholars, so the 50,000 scholars might have attended 800 schools. As 3 per cent. of the population in 1833 was 43,200, and as the percentage attending school in 1833 would probably be less than in 1851, we cannot estimate the number of the same class as being more than 40,000 in 1833. These children would probably be found in 606 schools, and there would be left 3,500 endowed schools—mostly under the control of some religious body—attended by 113,764 children of the working classes.

The "free scholars" mentioned in the Report of the Parliamentary Enquiry of 1833, or the 400,000 to 500,000 children in schools connected with the Church of England, and the 60,000 children in schools connected with other religious bodies, are probably those given in the first table under the following headings:—

—	Schools.	Scholars.
<b>Maintained by Endowment :</b>		
Infant Schools - - - - -	30	1,450
Daily Schools - - - - -	3,470	112,314
<b>Maintained by Subscription :</b>		
Infant Schools - - - - -	197	13,081
Daily Schools - - - - -	2,632	165,436
<b>Maintained by Subscriptions and Payment from Scholars :</b>		
Infant Schools - - - - -	408	33,753
Daily Schools - - - - -	2,487	178,464
Totals - - - - -	9,224	504,498
<b>The other Day Schools given in the Table are :</b>		
Endowed Schools ( <i>i.e.</i> those for upper and middle classes) - - - - -	606	40,000
<b>Schools maintained by payment from Scholars :</b>		
Infant Schools - - - - -	2,350	40,721
Daily Schools - - - - -	26,791	691,728
Totals - - - - -	29,747	772,449

It remains to be seen how many of the schools "maintained by payment from scholars" were attended by the children of the working classes.

The private schools in the Census of 1851 were estimated (*i.e.*, after allowing for those places which made no return) at 30,524, with 721,396 scholars. Of these, Mr. Horace Mann considered that 15,000 schools with an average of 15 children a school, or a total of 225,000 children, would probably be adapted for this class of children. These would be the Inferior Private Schools, consisting "principally of Dames' schools, only reading and writing taught, the latter not always." The remaining 15,524 schools with 496,396 scholars would represent the schools and the scholars of the upper and middle classes. In 1833 the number of schools maintained by the payment of the scholars are returned as 29,141, with 732,449 scholars—numbers somewhat similar to those of 1851, but with a greater number of scholars per school. Of these 29,141 schools 2,350 are for infants only, and 26,781 for daily scholars. (In the Report of 1833 a school is called an "Infant School" when the children leave school at seven years of age; where they remain after seven the school is called a "Daily School.") These Infant Schools were probably mostly Dames' Schools, and of the 26,791 Day Schools, 12,500 may also be reckoned as "Inferior Private Schools." If we take a smaller number, we shall find the schools for the upper and middle classes were as numerous in 1833 as they were in 1851. For a similar reason we must estimate these 12,500 schools as having a greater average number of children per school than in 1851. If we allow 20 for each school, we shall have a total of 250,000 children attending the Inferior Day Schools and 40,721 attending the Infant Schools, and if we add these to the 504,498 "free scholars," we get the following result:—

—	Schools.	Scholars.
Free Schools or Schools maintained by Religious Bodies - - - - -	9,224	504,498
Private Schools—Infant School - - -	2,350	40,721
"    Day Schools - - -	12,500	250,000
Totals - - - - -	24,074	795,219

That is, in 1833, there were 24,074 schools attended by 795,219 children of the working classes. That this estimate is not too high, may be seen by comparing the figures with those given in 1851, when Mr. Horace Mann, having the separate Returns from each school, was enabled to give the first reliable analysis of the educational survey of the country.



	1833.	1851.
Population - . . . . .	14,400,000	17,927,609
Percentage of increase in 18 years . . . . .	—	24·4
Total number of schools . . . . .	38,971	46,042
„ „ scholars . . . . .	1,276,947	2,144,378
Percentage of total scholars to population . . . . .	8·8	11·9
Schools for children of labouring classes . . . . .	24,074	29,718
„ „ other classes . . . . .	14,897	16,324
Scholars in schools for labouring classes . . . . .	795,219	1,597,982
„ „ other classes . . . . .	481,728	546,396
Percentage of children of labouring classes at school to population . . . . .	5·5	8·9*
Percentage of children of other classes at school to population . . . . .	3·3	3·0

\* This applies to the whole country. In large towns the percentage was very much smaller, consequently it was greater in country districts.

The increase of the number of Schools for children of the labouring classes during these 18 years was 5,644, and that for the other classes was 1,427, or a percentage increase of over 23 and 9 respectively. The increase in the number of scholars was 802,763 in the case of children of the working classes, and 64,668 in the case of other classes, or a percentage of 100 and 13 respectively. If it be objected that the increase in one class is altogether out of proportion to that of the other, it must be borne in mind that in the case of those classes above the working classes education had been established for years, while in the other case the increase in those receiving education each year was rapid. Take, for instance, the progress of the National Society, including Sunday and Day Scholars:—In 1813 there were 230 schools with 40,484 scholars; in 1820, 1,614 schools, with about 200,000 scholars; in 1830, 3,670 schools with about 346,000 scholars. Also it must be remembered that the Government grants, though large, were only given *in aid*, not for the entire expenses of building, etc., so that large sums must also have been raised voluntarily. If, however, it is still held that the increase in the number of scholars is too great, and that they could not have been doubled in 18 years, it will only prove that we must allow a greater number of children of the working classes as attending school in 1833. Mr. Horace Mann says that “Lord Kerry’s Parliamentary Returns of 1833 were probably deficient by as much as 10 per cent.” If we add 10 per cent. to 795,219 we get 874,740, so we shall be, perhaps, safe in assuming that nearly 900,000 children of the working classes were attending “schools” in 1833.

Dr. Farr, of the Registrar-General's office, prepared for the Schools' Inquiry Commission of 1864 a paper to show how many boys were within the scope of the Inquiry. He took the number of inhabited houses assessed for house duty, *i.e.*, the number of houses of the annual value of £20 and upwards; the number of marriages by licence and banns; the income tax assessments.

The Committee of Council on Education in the Report for 1869-70 say:—

"Dr. Farr, as the result of several calculations on independent bases, made by him for the Schools Inquiry Commission, arrived at the conclusion that 1 in 7·2 of the entire population belongs to the middle and upper classes, and this result is confirmed by the inquiries of various other authorities who turned their attention to the same point when reporting to that Commission. . . . Now, in every 1,000 of the population there are 75 between the ages of 3 and 6, and 135 between 6 and 12. . . . In other words, 21 per cent. of the population are of school age (*i.e.*, between the ages of 3 and 12)."

Applying this percentage to the population of 1833 and 1851, we find

	1833.	1851.
Total population . . . . .	14,400,000	17,927,609
Population of middle and upper classes . . . . .	2,000,000	2,489,945
"    working classes . . . . .	12,400,000	15,437,664
Population between 3 and 12 of the middle and upper classes . . . . .	420,000	522,888
Population between 3 and 12 of the working classes . . . . .	2,604,000	3,241,919
Percentage of children of middle and upper classes at school to population of same class between 3 and 12 years of age . . . . .	114·6	104·4
Percentage of children of working classes at school to population of same class between 3 and 12 years of age . . . . .	30·5	49·2

As in addition to these children between 3 and 12 years of age there must be added in the case of children of the upper and middle classes, children above 12 years of age, it is clear that Dr. Farr's figures do not agree with the population in 1833 and 1851, or—and this is more probable—the number of children of the working classes attending school was even greater than has been allowed for by us and also by Mr. Horace Mann.

Further and more important questions now arise—As to the buildings, the teachers, and the instruction given.

First, we are met with a serious difficulty, inasmuch as the designation "school" has been adopted for places where children were only "minded," or taken care of during the absence of their parents at work. The so-called education commenced often at two years of age, often at eighteen months. These were the places where "reading and writing" were supposed to be "taught, the latter not always"; where, as one dame confessed, "it is not much they pay me, and it is not much I teach them"; where only one or two books were found, sometimes

only "fragments of books"; where the attendance was very irregular, the buildings often of the poorest, and the teachers' attention distracted by other occupations. A few extracts concerning these schools in 1837 and 1869 will be found on subsequent pages. It is sufficient for the present to say that probably a third of the 900,000 scholars were to be found at schools of this description.

Of the schools connected with the religious societies and of the endowed schools available for the children of the working classes, we may form a notion of their unsatisfactory condition from the fact that in 1851, only 3,076—or, if we add those the date of whose building was not given, only 3,574—out of the 7,420 existing in 1833, were then standing, or had not been restored, or enlarged. Many of the schools were doubtless held in the upper room of a cottage, or in a room of the vicarage, in chapels, or in whatever building was obtainable. They were often deficient in apparatus and books, ill-drained and imperfectly ventilated. Of the teachers we find few instances of their having been trained. The British and Foreign School Society had one training college; but "teachers seldom continue in training at the model school for so much as three months." On the other hand, however, "the number of persons trained was last year (1832), much higher than formerly, and amounted to 98 persons male and female, of whom 63 were appointed to schools." The National Society has "since the commencement of its operations in 1811 trained 2,039 persons for masters and mistresses. The training, however, is upon an average for five months each. The number of persons educated and appointed to schools last year (1832) amounted to 65, which is below the usual average." So that 3,000 to 4,000 teachers with about four months' training each is the utmost that can be estimated for the 24,000 elementary schools. Even in 1848 we find the inspectors saying: "The want of trained teachers is deeply felt in this district. It is with great difficulty that the schools can be supplied with any teachers at all qualified to continue even the present course of instruction." "In this county, as elsewhere, the want of duly trained teachers is very great." "A vast number of the teachers are still in a very inefficient state, both as regards their acquaintance with the various subjects of instruction, and still more as regards the method of communicating what knowledge they do possess to the children entrusted to their care."

In further evidence of the unsatisfactory nature of the education given in 1833, there must be considered, in addition to the want of training in the teacher, the irregularity of the attendance of the children, the short time that they remained at school, and the great want of books and apparatus, to say nothing of the kinds of books which were procurable at that time. As to the irregularity of the attendance, there are frequent complaints extending far beyond the year that we are now considering. "At one of the national schools in which the books were well kept, there were 400 scholars, and they had admitted nearly 900 in eleven months, they never had more than 400 on the books at the same time during the eleven months" is the evidence in 1837. The school life of a child of the working classes was estimated in



1851 as about four years between the ages of five and fifteen. But as the attendance was very irregular, it is doubtful whether the actual school life (reckoned by their attendance, not by the time during which their names were on the school registers) can be fairly estimated at more than half that period.

Perhaps the best idea of the want of books and apparatus may be formed from a few extracts from the reports of some of Her Majesty's Inspectors of Schools in 1848—that is fifteen years after the period we are considering, and just previous to the introduction of the "Minute" providing for grants to schools towards the "purchase of lesson and text-books, and maps for elementary schools." "Most of the schools are very deficient in books. Those in general use among the lower classes are the Society's books, Nos. 1 and 2, the parables, miracles, discourses of our Lord, and the Sermon on the Mount. These are generally in a dirty and tattered condition; the children read them over and over again until they know them by heart. . . . In a large proportion of the schools the books in general use are of a religious kind; and even when others of a different description have been introduced the supply is generally very scanty." "The want of fit and proper books on secular subjects may be considered amongst the chief obstacles to the progress of education in our national schools; and it is one which is now universally felt and acknowledged. A large number of schools which I have visited possess no books whatever, save the Bible and extracts from the Bible, which are consequently made the common task-books for children of all ages. The very infants are taught to read out of these extracts from the Bible." "The entire want of useful apparatus has been a great hindrance to the advance of science in many of our schools. Even from the want of a single blackboard the study of arithmetic, linear drawing, and vocal music has been much impeded; whilst an almost incredible extent of ignorance in geography, both local and general, has been occasioned by the absence of maps and globes."

But although the teachers were, as a rule, not trained, and often unable to impart knowledge, although the buildings were frequently not suitable for schools, the books deficient in numbers and quality, the attendance of the scholars very irregular, yet the "first step" not only had been taken, but the children had been accustomed to school life; and considering the difficulties that had to be contended with, it is highly satisfactory to find that after about thirty years—for we cannot date the commencement of day schools much beyond the beginning of this century—we should find out of the working class population of 12,400,000, 900,000 of their children in schools. We have made no mention of Sunday-schools which provided a certain amount of education for those who attended; but on the one hand it is difficult to separate the Sunday-schools from those that were Sunday and Day-schools also; and on the other to distinguish between the "adults" and "children" who were all taught together. The Return of 1833 gives a total of 16,828 Sunday-schools and 1,548,890 scholars—

children and adults. The Sunday-schools taught the children to read, and were probably more allied to the Day-schools of to-day than to their present Sunday successors.

It is too frequently the case in estimating the quality and quantity of the instruction given in 1833 to pay more attention to the facts disclosed with regard to large towns, and to the poor results obtained at Dames' Schools, than to the whole number of schools in the country. If we could take the ordinary school in a moderately-sized village or in a small town, where the population had not increased too rapidly for the school accommodation to keep pace with, we should find a far more satisfactory state of affairs than is generally imagined. The population of England and Wales in 1831 was returned at 13,897,187,\* and the number of day scholars of all classes in 1833 was 1,276,947, which is 9·1 per cent. of the population. In England only it was 9·3 per cent., and in Wales only 6·7 per cent. We have noticed that compared with the estimated population of 1833 the number of scholars was 8·8 per cent., of which 5·5 per cent. were the children of the working classes. In the agricultural counties, where there were few large towns, it will be seen from the few specimen counties given below that the percentage was higher.

Counties.	Population (1831).	Infant and Daily Schools (1833).	Scholars (1833).	Percentage of scholars in 1833 to popu- lation in 1831
Berks - - -	145,389	534	16,574	11·3
Cornwall - -	300,938	1,089	31,629	10·5
Cumberland -	169,681	643	21,531	12·6
Devon - - -	494,478	1,839	54,971	11·1
Dorset - - -	159,252	711	18,158	11·4

On the contrary, in the counties with large increasing manufacturing towns the percentage was much lower. Take, for instance, the following:—

Counties.	Population (1831).	Infant and Daily Schools (1833).	Scholars (1833).	Percentage of scholars in 1833 to popu- lation in 1831.
Lancaster - -	1,336,854	2,220	97,534	7·2
Stafford - -	410,512	912	35,710	8·6
Warwick - -	336,610	763	26,041	7·7
York (West Riding)	976,350	2,002	73,932	7·5

\* We take 1831, as it is impossible to give the population of each county for 1833.



Also in considering the state of education in 1833 it is not fair to compare it with its condition at the present time, when it is compulsory in every respect, compulsory to supply the schools, compulsory to make the children attend, and compulsory on the children attending. But let us compare 1833 with 1870, the beginning of one period with the end, the time when the voluntaryists had been working between thirty and forty years, with the end of about the same period during which Government grants had been given towards building; towards the supply of books, maps, etc.; towards the training and encouragement of teachers and, latterly, towards the annual expenses of the school. The estimated population of England and Wales in the middle of the year 1870 was 22,090,163, which gives, according to Dr. Farr's estimate, 3,068,078 for the upper and middle classes, and 19,022,085 for the working classes. The number of children on the books of day schools to which annual grants were paid was 1,693,059, or 7.6 per cent. as compared with the above-mentioned 5.5 per cent. in 1833, or 42.3 per cent. of the children of the working classes attending school to the children of the same class between three and twelve, as compared with 30.5 in 1833.\* But of those 1,693,059 the average attendance was only 1,152,389, while there was accommodation for 1,878,584. As to the irregularity of attendance, the Committee of Council on Education say in their Report, 1870-71:—"The accommodation in our schools continues to be largely in excess of the number of children who avail themselves of it, while the attendance at inspected schools falls grievously short of the supply of scholars who ought to be forthcoming from the population." The reports of the Inspectors contain numerous remarks on this subject. The following are a few from the reports for 1870:—"In no single school (in my district) has the attendance of the children been regular." "The attendance is still in general far less regular than would be desirable." "No one who has not had practical experience of it can have any idea of the immense waste of power and energy, not to say money, which irregular attendance produces, or of the small number of those children who reach the 'moderate' highest standard under the present system." "But of all drawbacks irregularity of attendance continues to be one of the most prominent, whether in country places or in such towns as it has fallen to my lot to visit."

That the education given in 1869 was not satisfactory may be seen from the following extract from the Committee of Council's Report for 1869-70. After producing figures in reference to the numbers presented for examination in the different standards, the Report goes on to say:—"Such results, we must repeat, cannot be accepted as satisfactory. They show that out of every 1,000 children in our schools qualified by age and attendance only 98 were presented in the two higher standards, in place of 319 who ought to have been prepared to pass such an examination at the close of what must be to them the brief period of their school life."

\* Of course in 1870 there were children at schools other than those receiving annual grants.



And of the buildings in 1870, although as a rule favourably spoken of, having been "built in comparatively recent times, with the experience of former years as a guide," yet we find Her Majesty's Inspectors still able to refer to a few "of a very plain and primitive description. . . . which, with a certain amount of symmetry outside, seem to aim at as much discomfort as possible within." "In the course of a year or less I expect to witness a perfect revolution in the very important matter of school premises—a revolution truly needed in some parts of my district, and one which I shall joyfully welcome." "As regards ventilation, I regret to say that in many schools it is unsatisfactory." "The adaptation of buildings originally constructed for churches into school-rooms is seldom a success, and is by no means to be encouraged. A custom has arisen of late years to construct churches, especially temporary ones, with such small windows they hardly suffice for purposes of public worship, and when turned into schools for reading and writing require to be much altered to obtain a due amount of light, ventilation, and desk room."

## III.—PARLIAMENTARY AND OTHER INQUIRIES.

The extracts from the reports and evidence of witnesses examined before the committees of the chief Parliamentary and other public inquiries show, in different ways, the state of elementary education during the years 1833-1870. It is impossible for us to do more than give a few extracts from each report, but these may serve to give some idea of the general condition of things in the successive years in which the inquiries took place.

## 1.—EDUCATION INQUIRY, 24TH MAY, 1833, COMMONLY CALLED LORD KERRY'S PARLIAMENTARY RETURN.

In pursuance of an Address of the House of Commons of the 24th May, 1833, a return was asked of the number of schools in each town, parish, chapelry, or extra parochial place; which return, after stating the amount of the population of the said town or place according to the last census, should specify:—

1. Whether the said schools are infant, daily, or Sunday schools.
2. Whether they are confined, either nominally or virtually, to the use of children of the Established Church or of any other religious denomination.
3. Whether they are endowed or unendowed.
4. By what funds they are supported if unendowed, whether by payments from the scholars or otherwise.
5. The numbers and sexes of the scholars in each school.
6. The age at which the children generally enter, and at which they quit school.
7. The salaries and other emoluments allowed to the masters and mistresses in each school.
8. What schools have been established or revived since 1818.
9. The schools to which a lending library is attached.

An abstract of the answers and returns made pursuant to the Address was ordered to be presented on the 20th March, 1835, and is contained in three volumes. The required particulars are arranged according to counties, under which in alphabetical order are the names of each town and place. From the summary at the end of the third volume of the Report the following particulars are taken:—

The resident population of England and Wales in the year 1831 amounted to 13,897,187; which number, at the usual rate of increase (one and a-half

per cent. per annum) must have become 14,400,000 when the education inquiry was made and answered. At that time the children under instruction at infant and other daily schools (being 1,276,947) were nearly nine per cent., and the children and others who attended Sunday-schools (being 1,548,890) were nearly eleven per cent. of the above population: the proportion of children from five to fifteen years of age being twenty-four per cent of the entire population, as was ascertained by enumeration in the year 1821.

				Schools.	Scholars.	Totals.
1. Infant Schools				2,985		
Number of Infants at such schools, ages from two to seven years.	Males			—	29,543	89,005
	Females			—	31,069	
	Sex not specified			—	28,393	
2. Daily Schools				35,986		
Number of children at such schools, ages from four to fourteen.	Males			—	549,729	1,187,942
	Females			—	434,810	
	Sex not specified			—	203,403	
Schools				38,971		
Total of children under Daily Instruction				—	—	1,276,947*
3. Sunday Schools				16,828		
In which are children and adults.	Males			—	634,638	1,548,890*
	Females			—	637,101	
	Sex not specified			—	277,151	

Maintenance of schools (rather as an approximation than an exact account) :

Schools.	By Endowment.		By Subscription.		By Payments from Scholars.		By Subscriptions and Payments from Scholars.	
	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.	Schools.	Scholars.
Infant Schools	30	1,450	197	13,081	2,350	40,721	408	33,753
Daily Schools	4,076	152,314	2,632	165,436	26,791	691,728	2,487	178,464
Total Day Schools	4,106	153,764	2,829	178,517	29,141	732,449	2,895	212,217
Sunday Schools	571	39,533	15,244	1,423,377	101	5,718	912	80,262
Grand Total	4,677	193,297	18,073	1,601,894	29,242	738,167	3,807	292,479

Schools established since the year 1818, or, more properly speaking, the increase of schools since 1818 :—

Infant and other daily schools - 19,645, containing 671,243 scholars.

Sunday schools - - - 11,285, „ 1,123,397 „

\* This return was probably deficient by as much as 10 per cent. In Liverpool alone, it was ascertained the omissions amounted to as many as 15,500 scholars, and thought some few duplicate returns were made, there seems to be no doubt but that the omissions largely preponderated. (Mr. Horace Mann's Report 1851, Education Census.)



Lending libraries of books attached to schools in England and Wales are 2,464.

*Infant Schools.*—All schools where the children are said to leave the schools at or before seven years of age, are entered as infant schools.

*Daily Schools* include colleges (except those at Oxford and Cambridge), grammar schools, boarding schools, proprietary schools, National and Lancasterian schools, and preparatory schools of every description, where the children remain beyond seven years of age.

*Sunday Schools.*—Of these 1,238 are returned from places where no other school exists, and the children (60,245 in number), who are instructed therein are not supposed to be instructed at any other school; at all other places Sunday-school children have opportunity (more or less) of resorting to daily schools also, but in what number or in what proportion duplicate entry of the same children is thus produced must remain uncertain. The National Society represent all their schools to be either Sunday or daily and Sunday-schools, so that every daily national school is really a Sunday-school also . . . but daily national schools have not been entered as Sunday-schools unless expressly so described, wherefore the actual number of children who receive instruction at Sunday-schools is greater than appears in this summary.

Remarks on the four chief educational societies in the metropolis :—

1. The Society for the support and encouragement of Sunday-schools throughout the British Dominions. It was established in London in 1785, and appears to have arisen out of the exertions made by Mr. Robert Raikes, of Gloucester, in 1783, the original founder of Sunday-schools. The numbers of scholars in schools connected or corresponding with this society are not given, but grants were made last year (1833) to 434 schools, containing 35,370 scholars, of which 175 schools had in former instances received assistance.

2. The Sunday School Union, instituted in 1803. Any schools which report to the union and contribute any sums are considered to be in its connexion and entitled to the advantages which it is the practice of the Union to afford. In 1833 there were in England and Wales 6,836 schools, 110,702 teachers, and 926,412 scholars. The Union does not directly assist in establishing or supporting week-day schools, yet it has endeavoured to promote their success. The scholars readily attend the daily schools, in some places to the extent of more than a half. Evening schools are had recourse to for the furthering of their instruction, where daily schools do not exist. It is stated that the Sunday-schools of the union have been doubled in their numbers within the last fifteen years.

3. The British and Foreign School Society was formed in 1808, and arose out of the exertions then made by Mr. Joseph Lancaster. The society maintains a model school on an extensive scale in the Borough Road. The teachers seldom continue in training for so much as three months. The schools of this society are not affiliated or brought into union by means of any form or terms, and, except in regard to the metropolis, no returns have been obtained of the number of children receiving education in them. It is, however, stated by the inspectors that they are much less numerous than the National schools. It is devoted exclusively to the promoting of week-day schools only.

4. The National Society for Promoting the Education of the Poor in the Principles of the Established Church. It was formed in 1811, and for the purpose of carrying its objects into effect it adopted the discovery made

by the Rev. Dr. Andrew Bell, while in charge of a military school at Madras in 1797, and was incorporated in 1817. The society maintains a central boys' and girls' school, situated in the Sanctuary, Westminster, and is at considerable expense in providing for the instruction of masters and mistresses intended for schools. Since the commencement of its operations 2,039 persons of this description have been under its care, and continued so upon an average for five months each. It promotes schools for infants under six or seven years of age, Sunday and daily schools for children from six or seven to about thirteen, and Sunday-schools, chiefly for those who have passed through the other institutions, and are engaged in labour during the week. There are upwards of one million children in the Sunday or Sunday and daily Church of England schools.

In 1813 there were 230 schools with 40,484 children.					
„ 1820	„	1,614	„	200,000	„ (about).
„ 1830	„	3,670	„	346,000	„ „
„ 1834	„	* 5,559	„	516,181*	„

## 2.—EDUCATION IN LARGE TOWNS, 1837.

On the 30th November, 1837, a Select Committee of the House of Commons was appointed to consider the best means of providing useful education for the children of the poorer classes in large towns throughout England and Wales.

In their Report, dated 13th July, 1838, the Committee say:—

“They are convinced that, however inadequate the present system of instruction for the humbler classes may be in many districts, it is owing almost entirely to the laudable and persevering efforts throughout the country of benevolent individuals that anything at all worthy the name of education has been afforded to the children of the working classes in large towns. In some places, schools are supported almost entirely by the bounty of one or two persons. In other districts, individuals, led by religious or charitable motives, have formed themselves into school societies, have subscribed (often from restricted means), have given their time and attention to the establishment of schools for the poor, and have thereby done much good.”

“There appear to be no returns to Parliament of any authority on this point (the present state of education of the humbler classes), nor indeed are there at present adequate means of making them. The returns made to queries sent out by the Committee on Education in 1835 are found to be incorrect as well as defective.”

“Your Committee have agreed to the following resolutions:—

1. That in the Metropolis and the great towns of England and Wales there exist a great want of education among the children of the working classes.
2. That it is desirable that there should be means of suitable daily education (within the reach of the working classes) for a proportion of not less than about one-eighth part of the population.
3. That the amount of assistance afforded by Government should be regulated as heretofore, subject to modifications of their rules in cases where the poverty of the district was proved to require it; the special ground being reported in each case.

\* Of which 178,740 boys and 145,305 girls are in Sunday and day schools; and 93,929 boys and 98,207 girls are in Sunday schools.



4. That under existing circumstances, and under the difficulties which beset the question, your Committee are not prepared to propose any means for meeting the deficiency beyond the continuance and extension of the grants which are at present made by the Treasury for the promotion of education, through the medium of the National and the British and Foreign School Societies."

The following remarks are taken from the evidence given by witnesses before the Committee:—

In the five parishes of Westminster, some sort of daily instruction is afforded to about 1 in 14 of the population, instead of 1 in 8, as is desirable; and that afforded to one-third of the scholars is very indifferent. In Bethnal Green, instruction is given to less than 1 in 20 of the population. In Spitalfields, Whitechapel, St. George-in-the-East, Wapping, Newington, Bermondsey, Christchurch (Surrey)—leaving out schools where the education is worthless—the average instruction of these 7 places is 1 in 27 of the population, without allowing for the deficiency in attendance (calculated at 15 per cent.), or for the increase of population since 1831. In the large towns about 1 in 12 of the population receive some sort of daily instruction, but only about 1 in 24 an education likely to be useful. In Leeds, only 1 in 41; in Birmingham, 1 in 38; in Manchester, 1 in 35.

The British and Foreign School Societies say:—"In London we have 117 schools, containing 18,074 children."

"The Sunday School Union report a million and a half of children in their Sunday schools. Now these children, with very few exceptions indeed, do not go to National Schools, because the National School children go to their own Sunday schools, which are not in connection with the Sunday School Union. As there are a million and a half of children, if that report be correct, going to dissenting Sunday schools generally, these children must receive daily instruction in the schools conducted on the plan and principle of our Society, or be found in the day and dame schools. But a great number receive no instruction on the week-day whatever."

*Attendance of Children.*—Very irregular at dames' schools. At endowed schools, charity schools, schools attached to public institutions, national schools, and Lancasterian schools, "the great evil of these is the irregularity of the attendance of the children. . . . I may mention that at one of the national schools in which the books are well kept, there were 400 scholars, and they had admitted nearly 900 in eleven months; they never had more than 400 on the books at the same time during the eleven months. The average attendance of children at the British schools does not much exceed two years in London, but in the country, from inquiries I have made, it is extended to three or four years. The hours of attendance are similar to those in the public schools, from nine till twelve in the morning, and from two to five in the afternoon in the summer time, and from two to four in the winter."

*Books.*—Dame schools are very ill-supplied with books. Very few of these schools were found to possess more than fragments of books, and in many cases no books were to be seen, the mistress not having the means to procure them, and the parents neglecting to do so. They use such books as Carpenter's spelling-book and Mavor's spelling-books, and in many cases they just repeat the words after the mistress.

*Education.*—(1) Dames' Schools.—The children are sent there to be taken care of, as I believe they are in other places, and the education is generally very poor. The education given is of a very poor and useless description. I have never met with any of these children who could read unless they have been taught in public infant schools.

(2) Common Day Schools.—The children remain at them from five months to five or six years, and acquire a very imperfect knowledge of reading, writing, and arithmetic.

1 and 2.—In the first place the teachers are themselves very imperfectly instructed. Secondly, if their personal knowledge were much more exten-



sive than it is they have no acquaintance whatever with any correct methods of conveying religious and secular instruction; they have no idea whatsoever of the proper mode of conducting the moral and industrial training of children. It is supposed that education will be best promoted by coercion. There is not much attention paid to religious or moral instruction in these schools.

*Buildings, etc.*—(Dame and Common Day Schools).—The rooms in which the children receive education are very often exceedingly confined; the atmosphere is often noisome, in many instances being small cellars, and in others confined garrets. These schools are generally found in very dirty, unwholesome rooms, frequently in close, damp cellars, or old dilapidated garrets. In one of these schools eleven children were found in a small room, in which one of the children of the mistress was lying in bed, ill of the measles, and no less than thirty of the usual scholars were then confined at home of the same disease. In another school all the children, to the number of twenty, were squatted on the bare floor, there being no benches, chairs, or furniture of any kind in the room. Order and cleanliness are little regarded, and the children are for the most part congregated in close and dirty rooms, in which the whole business of the school is carried on, and where the family sleep. A single room of about fourteen feet square, containing about twenty or thirty, and sometimes forty children, male and female together, of an average of under six years of age. In a garret, up three pairs of dark, broken stairs, was a common day school, with forty children, in the compass of ten feet by nine. On a perch, forming a triangle with the corner of the room, sat a cock and two hens; under a stump bed, immediately beneath, was a dog kennel in the occupation of three black terriers, whose barking added to the noise of the children, and the cackling of the fowls, on the approach of a stranger, was almost deafening; there was only one small window, at which sat the master, obstructing three-fourths of the light it was capable of admitting.

*Teachers.*—With respect to dame schools, they are generally in the most deplorable condition; the greater part of them are kept by females, but some by old men, whose only qualification for this employment seems to be their unfitness for any other. Many of those teachers are engaged, at the same time, in some other employment, such as shopkeeping, sewing, washing, etc., which renders any regular instruction among their scholars absolutely impossible. One of the best of these schools is kept by a blind man, who hears his scholars their lessons, and explains them with great simplicity; he is, however, liable to interruption in his academic labours, as his wife keeps a mangle, and he is obliged to turn it for her. There is no system of education in the dame schools; it is perfectly out of the question to ask them what system of discipline they adopt. The cane is always lying by them, if not the rod, and you cannot stay many minutes before you see it in use. Very commonly the dames are sensible of their deficiency. I have met with instances of them saying: "It is not much they pay me, and it is not much I teach them." The teachers, generally speaking, are totally unqualified; very few, if any, have ever had any previous education for the purpose. A great proportion of them have undertaken it in consequence of distress, and also because they are getting too old for anything else. The masters and mistresses are generally obliged to follow some other occupation for a living. In one instance I found a woman washing when she was teaching the children.

### 3.—GENERAL INQUIRY MADE BY THE NATIONAL SOCIETY, 1846-7. ENGLAND AND WALES. SCHOOLS CONNECTED WITH THE NATIONAL SOCIETY OR CHURCH OF ENGLAND.

1. 1,422,659 children in the Schools, of whom 955,865 are receiving *daily* instruction.
- 22,225 Schools, or rather Departments, of which 17,015 are Day Schools, or rather Departments.

[A school for boys and girls under one roof, but conducted by a master and mistress in separate rooms, has generally been reckoned as two schools.]

Buildings, 21,904, but this includes rooms of every description in which schools are held, including dames' cottages, portions of churches, and vestry-rooms.

Real school rooms stated to be 16,715, of which 11,611 may be said to be sufficiently secured for the purposes of education, and 5,189 neither legally nor virtually secured.

Residences for teachers, 9,129, of which 4,800 are legally or virtually secured.

Paid Masters and Mistresses 23,415, viz. :—

3,407 Dame School Mistresses.

9,593 Masters partaking of a parochial character.

10,415 Mistresses " " "

All dame schools are not included in this return.

Paid Monitors, 2,155 male; 2,256 female; total, 4,411.

Gratuitous Teachers, 54,005 : viz., 22,775 males and 31,230 females.

Salaries (partly estimated), 621,362*l.* Expense of maintenance, 874,947*l.* 7,367 free schools, 14,878 pay schools.

No schools in 1,172 parishes and ecclesiastical districts with population of 776,633.

Sunday Schools only or Dame Schools only or both in 2,144 parishes and ecclesiastical districts, with population of 1,556,367. Some too small to require more.

Grants of Society since 1811 to Schools in England and Wales, 292,467*l.*, chiefly to schools and teachers' residences, viz., 1811-1838, 104,332*l.*; 1838-1847, 188,135*l.* (Does not include grants by Diocesan and Local Societies, which equalled 21,292*l.* in 1838.)

—	Estimated Population.	Day Schools.	Sunday Schools.	Day Scholars.	Sunday Scholars.
1837	15,084,941	10,856	6,068	558,180	438,280
1847	17,224,148	17,015	5,230	955,865	466,794
Increase -	—	6,159	—	397,685	—

A large number of schools, formerly only Sunday schools, have been opened for daily instruction.

#### 4.—CENSUS (EDUCATION) RETURNS, 1851.

Extracts from Mr. Horace Mann's Report on the Education Returns of England and Wales, furnished by the census of 1851 :—

"Returns have been received from 44,836 day schools (*i.e.*, establishments, not departments) (15,411 public and 29,425 private), from 23,137 Sunday-schools, from 1,545 evening schools for adults, and from 1,057 literary, scientific, and mechanics' institutions. But, in addition to the above number of schools, from which returns were received, the lists supplied by the enumerators make mention of 1,206 other day schools (107 public and 1,099 private) and 377 other Sunday schools, from which *no* returns were procurable. If we assume that each of the last-named schools contained, upon an average, as many scholars as did each of the schools which made returns, the ultimate result of the Education Census would be this :—

—	Day Schools.			Sunday Schools.	Evening Schools for Adults.
	Total.	Public.	Private.		
Schools - -	46,042	15,518	30,524	23,514	1,545
Scholars - -	2,144,378*	1,422,982	721,396	2,407,642†	39,783

\* As the population of England and Wales in 1851 was 17,927,609 this would give a per centage of nearly 12, *i.e.* that on the 31st March 1851 one person in every 8·36 was attending school.

† The Sunday scholars would be one in every 7·45 persons.



This is unquestionably an under-statement of existing means of education. If it be assumed that the proportion of the sexes are the same in the schools which sent no returns as in those which sent returns, the total number of males in day schools would be 1,157,685, and of females 986,693; of which there would be in public schools 801,156 males and 621,826 females, and in private schools 356,529 males and 364,867 females. On a similar assumption the male scholars in Sunday schools would have been 1,193,788, and the female scholars 1,213,854."

The following statement shows how many of our present establishments had their origin in former and how many in later years.

Number of existing Schools established at each period.

Date.	Total.	Public.	Private.
Before 1801	3,363	2,876	487
1801-1811	1,042	599	443
1811-1821	2,207	1,120	1,087
1821-1831	3,482	1,265	2,217
1831-1841	7,467	3,035	4,432
1841-1851	22,214	5,454	16,760
Date not specified	6,267	1,169	5,098
Total	46,042	15,518	30,524

As to *Private Day Schools*, indeed, the statement proves but little, since the frequent changes, to which these are subject, of proprietors and residences, makes it certain that the great majority of those established in the last ten years are merely substituted for others which existed under other masters and in other places. It displays, however, rather strikingly the amount of private enterprise which positively now prevails, although it does not show to what extent, if any, such enterprise has been more active and productive in recent than in former times.

Most competent writers are now inclined to assume that one in *eight* would be a satisfactory proportion of the population which should attend schools, after making due allowances for practical impediments. This, on the population of England and Wales (17,927,609), gives 2,240,951 as the number to be under school instruction in 1851. This number, it is said, if constantly connected with day schools, allows an average of *five years and a-half* of school instruction to all the children between five and fifteen years of age; and, although the fact that the children of the middle and upper classes spend in general *more* than five years at school creates the certainty that the children of the poor spend *less*, yet, even allowing for this reduction, it is argued, the estimate would leave for the children of the labouring classes a period of four or five years' schooling between the fifth and fifteenth years—a longer time than, practically, children of these classes can be reckoned to remain.

But the number of school children between five and fifteen years of age is only 1,768,231, hence the school-life of children of the labouring classes would not be more than four years.

A rough attempt to classify, according to efficiency, the 29,425 private schools which sent returns produced the following results:—

1. Superior (classical, boarding, proprietary, ladies, etc.) - 4,956
2. Middling (commercial, etc.; teaching arithmetic, English grammar and geography - - - - - 7,095
3. Inferior (principally *dame* schools, only reading and writing taught, the latter not always) - - - - - 13,879

Undescribed - - - - - 3,495

29,425



Of the 13,879 inferior schools, a large proportion of the scholars are under five years of age. In 708 cases the returns are respectively signed by the master or mistress with a *mark*. The same is noticeable in respect to thirty-five *public* schools, most of which had small endowments.

The private schools contain the bulk of the children of the middle and upper classes of society; for, with the exception of the public endowed grammar schools (and these almost exclusively for boys) there seem to be no other class of schools to which they could resort in any number. If the previous distribution of the private schools, according to their character, can be accepted as approximately accurate, it will be found that (as the ascertained average of scholars to each of the schools there called "inferior" is about 15), the total number of scholars in about 15,000 schools, which probably are adapted for the children of the working classes, would be somewhere near 225,000, leaving a residue of nearly 500,000 to represent the children of the middle and upper classes. To these there cannot, apparently, be added more than 50,000 as likely to be found in any of the public schools; thus making the total number of the children of the middle and upper classes at school in March, 1851, to be 550,000. This, it will be seen, gives only an average of 5½ years' schooling for the children of these classes, on the assumption that they constitute a *fourth* of the total number between three and fifteen—viz., a fourth of 4,908,696 = 1,227,174). But as 50,000 more appear to be in regular receipt of adequate instruction, under professional teachers *at home*, the average period for the whole would be raised to six years.

Public schools may be separated into four subordinate classes, which, though not unusually distinct, are yet perhaps sufficiently defined to aid this object. The auxiliary support supplied by the scholars themselves, being generally common to all the classes, has not been considered to affect the distribution.

Classes of Public Schools.	Number of Schools and Scholars.			
	Schools.	Total number of Scholars.	Scholars.	
			Males.	Females.
Class 1. Supported by General or Local Taxation -	610	48,826	28,708	20,118
" 2. Supported by Endowments - - -	3,125	206,279	138,495	67,784
" 3. Supported by Religious Bodies - - -	10,595	1,048,851	569,300	479,551
" 4. Other Public Schools -	1,081	109,214	59,129	50,085
Total - - -	15,411	1,413,170	795,632	617,538

Class I. includes military (35), naval (14), woods and forests (1), corporation (3), workhouse (523), and prison schools (34). Class II. includes collegiate and grammar schools (566), and other endowed

schools (2,559). There are also 869 of the schools entered in class III., and 27 in class IV. which have slight endowments, so that the total number of schools receiving any amount of endowment will be 4,021, containing 317,576 scholars. On the other hand, a certain number—viz., 2,113—of the 2,559 other endowed schools, here placed in class II., are also in part supported by religious bodies.

The following statement shows the periods during which the 10,595 existing schools, comprised in Class III., were founded:—

	Number of Schools.	Connected with the National Society or Church of England.	Independents or Congregationalists.	Wesleyan Methodists.	Roman Catholics.	Baptists.	Other Religious Bodies.	British and Foreign School Society.
Before 1801	766	709	8	7	10	—	—	16
1801-1811	410	350	9	4	10	—	—	28
1811-1821	879	756	12	17	14	—	—	77
1821-1831	1,021	897	21	17	28	—	—	45
1831-1841	2,417	2,002	95	62	60	—	—	191
1841-1851	4,604	3,448	269	239	166	—	—	449
Not stated	498	409	17	17	14	—	—	46
	10,595	8,571	431*	363*	311	131*	331	852*

This, of course does not display the whole number of schools existing at end of the periods named; but only the number which, existing then, have survived until the present time.

Towards the cost of erecting or enlarging a certain number (about 2,000) of the 4,604 schools erected in 1841-1851, the Committee of the Privy Council has granted £320,000, whilst the total cost of the 4,604 may be estimated at £2,500,000.

The expression "other public schools" is designed to represent chiefly such as, deriving their main support from private subscriptions, are unconnected with religious bodies, or, if connected with them, only incidentally. The following is the list:—

Ragged Schools (exclusive of those supported by religious bodies)	123
Orphan Schools	39
Blind Schools	11
Deaf and Dumb Schools	9
School for Idiots	1
Factory Schools	115
Colliery Schools	41

\* Doubtless the Congregationalists, the Wesleyan Methodists, and the Baptists contribute to the support of the schools of the British and Foreign School Society, and several schools which are connected with particular bodies are distinctly styled in the Returns British Schools. Therefore a few schools are counted twice over,

Chemical Works Schools . . . . .	4
Foundry School . . . . .	1
Mechanics' Institute Schools . . . . .	5
Industrial Schools . . . . .	6
Agricultural Schools . . . . .	3
Railway Schools . . . . .	5
Philanthropic Society's Farm School . . . . .	1
Subscription Schools of no specific character . . . . .	717
	<hr/>
	1,081

5.—MANCHESTER, SALFORD, ETC., 1852.

Select Committee of the House of Commons, appointed 17 March, 1852, to inquire into the state of education in Manchester, Salford, etc.

Extracts from the evidence of witnesses examined:—

"The ages of the Sunday scholars vary from 5 years old to 30, and even upwards." "I suppose that children are probably taken from school at 10 or 11 years old at Manchester, whilst some are sent to work earlier than that." "Extremely few of the children of the labouring classes would be found at school after 12; extremely few." "The increase of day school attendance (in Manchester) during the last 17 years has not kept pace with the increase of the population." "The pupil teacher system is rendering great assistance to all schools that avail themselves of it."

The increase in Manchester since 1834 of day school accommodation has been 324 per cent., and of attendance 300 per cent.; in Salford the increase of accommodation has been 294½ per cent., and of attendance 171 per cent.

The ages of a few scholars at evening schools are as low as 8 and 9, the majority are from 15 to 18 and upwards.

Mr. Baines' evidence. He reckoned that one-fourth of the children belonged to the upper and middle classes, and that they remained at school on the average 7 years in 1818, and 8 years in 1846.

In 1818, children between 5 and 15 in England and Wales =

2,758,356 or 24·2 of the entire population.

One-fourth of upper classes = 689,589\*

Working classes ... = 2,068,767

In 1846, children between 5 and 15 =

3,891,127 (or 22·854 of the population.

One-fourth ... = 972,782 = Upper and middle classes

2,918,345 = Working classes.

<sup>10</sup>/<sub>10</sub> of 972,782 = 778,226 scholars of upper and middle classes. The whole number was 2,000,000, or 1,221,774 of the working classes, or 1 child in every 2½ children, and the average length of schooling would be 4 years and 9 weeks.

"I am disposed to think we might fairly add 20 per cent. to the number of the day scholars given by the returns of 1818, bringing them up from 674,883 to 809,859. The result would be 1 in every 6½ children, and the average schooling 1 year and 7 months.

"That is, of day scholars to population, 1 to 14 in 1818 and 1 to 8½ in 1846."

"The education of teachers is continually and rapidly improving."

\* Of these 689,589, if they are at school on an average of 7 years (out of 10) we should find 482,712 scholars of those classes at one time. The whole number of day scholars was 674,883, leaving only 192,171 for the labouring classes out of 2,068,767, or one child for every 10½ children, and the average length of schooling for the whole would be 10½ months.



## 6.—POPULAR EDUCATION IN 1858.

Commission to inquire into the state of popular education in England, 1858 (commonly called the Duke of Newcastle's Commission)

On the 30th June, 1858, a Royal Commission was appointed, with the Duke of Newcastle as chairman, "to enquire into the present state of popular education in England, and to consider and report what measures, if any, are required for the extension of sound and cheap elementary instruction to all classes of the people." The Report was to be presented in two years, but the duration of the Commission was subsequently extended to 30th June, 1861. The Report was presented to Her Majesty on the 18th March, 1861.

The principal recommendations were:—

1. That all assistance given to the annual maintenance of schools shall be simplified and reduced to grants of two kinds. The first of these grants shall be paid out of the general taxation of the country, in consideration of the fulfilment of certain conditions by the managers of the schools, and shall consist of from 4s. 6d. to 6s. on the average attendance of the scholars, and of an additional grant of 2s. 6d. a child instructed by pupil-teachers or assistant teachers. The second shall be paid out of the county rates, in consideration of the attainment of a certain degree of knowledge by the children in the school. The second grant shall be from 21s. to 22s. 6d. for every child who has attended 140 days in the preceding year. But the two grants together are never to exceed the fees and subscriptions, or 15s. per child in average attendance.
2. That a Board of Education should be established in every county or division of a county having a separate county rate, and in every separate borough having more than 40,000 inhabitants.
3. That the grants to training colleges be continued, but that certain alterations be made in granting teachers' certificates of proficiency.
4. That evening schools be more perfectly organised.
5. That educational and other charities be turned to better account.
6. Alterations respecting the education of children employed in factories, etc., of pauper children, vagrants and criminals, and of children in State schools.

We find from this report that since the foundation of the under-mentioned boards, or societies, large sums had been expended on behalf of education.

Name of Board or Society.	Date of Foundation.	Total amount since Foundation.
		£
National Society - - -	1811	724,599
British and Foreign School Society -	1808	156,664 †
Catholic Poor School Committee -	1847	71,756
Wesleyan Education Committee -	1840	88,460
Home and Colonial School Society -	1836	116,279
Church Education Society - - -	1853	10,072
Congregational Board of Education -	1843	173,677
London Ragged School Union - -	1844	58,325
Voluntary School Association*	-	-
Total - - - £.		1,399,832

Besides these societies there were, in connection with the Church of England, twenty-nine Diocesan Boards of Education which derive their incomes from voluntary subscriptions. The income of twenty-three of these boards, in the year 1857, was between £13,000 and £14,000. Almost all the diocesan boards made grants for building and repairing school-rooms and teachers' residences, and for supplying fittings and apparatus for schools.

Inquiry was made in the middle of 1858 as to the number of schools and scholars. There were in England and Wales 58,975 week-day schools, *i.e.*, departments, containing 2,535,462 scholars. Of these 24,563 were public schools, containing 1,675,158 scholars, and 34,412 were private schools, containing 860,304 scholars.

Hence the average number of scholars in public week-day schools was 68·2, and in private week-day schools 24·82. Of the scholars in public week-day schools, 911,152 were males and 764,006 were females. In the private schools there were 389,607 males and 470,697 females. Of the 2,535,462, 35,000 were in collegiate and superior endowed schools, and 286,768 in private schools for the upper and middle classes, making 321,768 children receiving a superior education. Thus the number of children of the poorer classes under education was 2,213,694.

There were 2,036 evening schools (*i.e.*, departments), with 80,966 scholars (54,571 males and 26,395 females); and 33,872 Sunday

\* The Commission was not able to obtain any returns from this association.

† This is the direct expenditure during the *ten years* preceding the year 1860. The total expenditure of the Society since the date of its foundation was not readily attainable.

schools, with 2,411,554 scholars (1,189,725 males and 1,221,829 females).

The 24,563 public schools may be divided into four classes:—

1. Schools supported by religious denominations	22,647	with	1,549,312	scholars
2. Schools not specially connected with religious denominations	357	"	43,098	"
3. Schools entirely or almost entirely supported by taxation	999	"	47,748	"
4. Collegiate and superior or richer endowed schools	560	"	35,000	"
	24,563	"	1,675,158	"

Of these numbers, those in 1 and 2, equalling 1,592,410, are of the class that might obtain Government grants, but in 1860 the number in receipt thereof was only 917,255, leaving 675,155 children deriving no annual advantage from them, in addition to the 573,536 in private schools, or a total of 1,248,691.

The average duration of school life for all classes of children is found to be 5·7 years; whereas the proportion of scholars to the population was, in 1851, one in 8·36—in the middle of 1858 it was one in 7·7.

Of the *Private Schools* some are described as "decidedly good, others indifferent, and others very bad indeed; in fact, they are of all degrees of merit. . . . It is to be feared, however, that the bad schools are the most numerous." "The teachers of these schools are, of course, of characters as various as the schools which they teach, but they have rarely been in any way trained to their profession, and they have almost always selected it, either because they have failed in other pursuits, or because, as in the case of widows, they have unexpectedly been left in a state of destitution." One of the Assistant Commissioners found evidence to justify the assertion that "none are too old, too poor, too ignorant, too feeble, too sickly, too unqualified in any and every way, to regard themselves, and to be regarded by others, as unfit for school-keeping. Nay, there are few, if any, occupations regarded as incompatible with school-keeping, if not as simultaneous, at least as preparatory employments. Domestic servants out of place, discharged bar-maids, vendors of toys or lollipops, keepers of small eating-houses, of mangles, or of small lodging-houses, needlewomen who take in plain or shop work, milliners, consumptive patients in an advanced stage, cripples almost bedridden, persons of at least doubtful temperance, out-door paupers, men and women of 70 and even 80 years of age, persons who spell badly (mostly women, I grieve to say), who can scarcely write, and also cannot cipher at all."

*Pupil-Teachers.*—"There can be no doubt that the system is, upon the whole, excellent."

*Teachers.*—"It is proved beyond all doubt that the trained teachers are greatly superior to the untrained teachers." "There is a tendency in school-teachers to neglect both the more elementary subjects and the



younger scholars." "It is necessary to institute a searching examination by competent authority of every child in every school to which grants are to be paid, with the view of ascertaining whether these indispensable elements of knowledge (reading, writing, and arithmetic) are thoroughly acquired, and to make the prospects and position of the teacher dependent, to a considerable extent, on the results of this examination." "Additional training colleges are wanted for the mistresses of infant schools. Teachers of private schools should be allowed to obtain certificates of competency, and to share in the public grant so far as they perform its conditions."

SCHOLARS.

Scholars.	Returns from 1740 Public Week-day Schools in specimen districts.	Returns from 3450 Private Schools in specimen districts.	Returns from Annual Grant Schools of the Education Department
	Scholars per cent.	Scholars per cent.	Scholars per cent.
Under 3 years of age	3'0	5'4	—
From 3—6	19'8	34'7	21'87
6—7	11'3	13'4	12'04
7—8	12'3	11'0	12'48
8—9	12'4	9'0	12'22
9—10	11'6	7'4	11'81
10—11	10'3	5'8	10'16
11—12	7'9	4'8	7'82
12—13	6'0	3'9	5'88
13—14	3'1	2'3	3'33
14—15	1'3	1'3	2'59
Above 15	1'	1'	—

"Almost all the parents appreciate the importance of elementary education, and the respectable parents are anxious to obtain it for their children; but they are not prepared to sacrifice the earnings of their children for this purpose, and they accordingly remove them from school as soon as they have an opportunity of earning wages of an amount which adds in any considerable degree to the family income." "Frequently the parents fail to appreciate the importance of regular attendance towards securing this result, or have not sufficient steadiness and self-denial to secure it, so that they keep children from school on trifling occasions."

In inspected schools "the large majority of the children never reach the first class, as they leave before they are 11 years of age." "The mass of the children get little more than a trick of mechanically pronouncing the letters, and the words which they read convey hardly any

ideas to their minds." The children are not taught elementary subjects so as to excite their intelligence. The school books in use are not well calculated to interest children. "Another great difficulty with which teachers have to struggle is the capricious removal of children from school to school. The extent to which this goes on is extraordinary." "We have strong testimony to the marked superiority of inspected over uninspected schools."

7.—REFERENCES TO ENDOWED SCHOOLS "DEVOTED TO THE EDUCATION OF THE LABOURING CLASSES ONLY," IN THE REPORT OF THE SCHOOLS INQUIRY COMMISSION, 1864.

A Royal Commission was appointed on the 28th December, 1864, to inquire into the education given in schools other than those inquired into by the Duke of Newcastle's Commission, and in schools reported on by the Earl of Clarendon's Commission. The latter inquiry was into the nine schools of Eton, Winchester, Westminster, Charterhouse, St. Paul's, Merchant Taylors', Harrow, Rugby, and Shrewsbury. The Duke of Newcastle's inquiry was into the education of the children of the working classes, and was "practically identical with those whose education is, or ought to be, aided from the Parliamentary Grant by the Committee of Council." "All that lies between these limits (*i.e.*, of these two Commissions) belongs to the province" of the Schools Inquiry Commission of 1864. The business of the Commission, therefore, was with secondary, not with elementary, education.

In their Reports (dated December, 1867) the Commissioners say that some difficulty was felt in deciding to what schools they should send their circulars of inquiry, owing to the absence of any means of satisfactorily ascertaining beforehand what schools were, in fact, comprised under the terms of their reference. For the endowed schools they took as the basis of their list all those which were called grammar schools. "The Commissioners, appointed by several Acts of Parliament in succession, inquired, during the period from 1818 to 1837, into almost all the charitable trusts in England and Wales, and made copious reports on a large number of endowed schools, but did not give any classification of them." In the year 1842 a digest of these reports was made and presented to Parliament. In these the schools were arranged in two classes, viz., first, "Schools in which Greek or Latin was required to be taught, or at the time of the Commissioners' inquiry into the school was, in fact, taught." These were called "Grammar Schools." The second class comprised "all other schools," which were called "Non-Classical Schools."

The Commissioners proceed to observe that "of the schools called in the above-named digest *non-classical*, amounting to nearly 2,200 in number, they had reason to believe that the large majority were devoted, both by their foundations and by actual use, to the education of the labouring classes only. Where, from information received from time to time, they found the case to be otherwise they included any such school in their list, and eventually thought it desirable to send their

questions in full to those of them (about 40 in number) which were reported by the said Charity Commissioners to have incomes exceeding £500 a year; and a very brief list of questions to the rest." (Vol. I., pp. 4, 5.)

Further on they say "the term 'endowed school,' strictly speaking, is applicable to a large number of schools which are not usually intended by the name (*e.g.*, "to schools held in buildings permanently devoted to the use of the school"). The endowed schools to which we shall refer are those which have usually, besides buildings, some income from charitable funds permanently appropriated to the school. There are about 3,000 schools, or foundations for schools of this nature established for the most part before the present century, of very different degrees of importance, and presenting every variety of excellence or badness.

Of these 3,000 endowed schools about one-fourth come strictly within the immediate object of our Commission, and we have accordingly reported on 782 (*i.e.*, "the schools which appear to come under the legal definition of grammar schools and to 70 or 80 others.")

There remained, therefore, over 2,000 endowed schools, which were not reported on as they gave a similar education to that given in the National or British Schools. And of the 782 schools reported on, a considerable number were found to be giving only an elementary education.

#### S.—BIRMINGHAM, LEEDS, LIVERPOOL, AND MANCHESTER, 1869.

Return relating to Schools for the Poorer Classes of Children in Birmingham, Leeds, Liverpool, and Manchester, dated 18th March, 1869.

H.M.I. Mr. Fitch enquired into the schools of Birmingham and Leeds, and H.M.I. Mr. Fearon into those of Liverpool and Manchester.

Extracts from the Reports:—

*Birmingham.*—Private schools kept by governesses in private houses. "Held in the ordinary living rooms in dwelling-houses of the humbler classes." "The majority are mere dame schools or nurseries, in which the children for the most part are received to be 'minded' or taken care of merely, and scarcely profess to be places of instruction." "In the humblest dame school it is not uncommon to find one, two, or three girls of 10 or 11 years of age." "The qualification of the private teachers are of the lowest order." "Children are heard to read or to say a spelling task; and they are set a copy or a sum to do, and in this way they come in time to read, write, and cypher, after a fashion; but they are not *taught* to do any one of these things." "The teacher has no power to determine what class-books shall be used, and no supply of books of his own; he is, therefore, dependent on the books the parents choose to send." "But the most striking characteristic of these humble private schools is the extraordinary idleness which prevails in them. I should say that three-fourths of the children whom I have seen were sitting, at my entrance into the rooms, without any occupation whatever."

*Leeds.*—Private schools in private houses by governesses. "There are degrees, of course, but there is scarcely one good school among them; in not one have I found a really skilful teacher, or one who had made it his business to know what good teaching is." "Children are 'minded,' are kept in some



sort of order . . . they come in time to read and write after a fashion." "The rooms are always ill-furnished for the purpose."

*Manchester.*—"Many of the private schools are held in premises in which it is injurious and improper that human beings should be gathered together for any purpose whatever, and in which instruction is physically impossible. The teachers of many of them are persons physically, morally, or intellectually disqualified for any office, involving even the lowest degree of responsibility. The instruction given, or pretended to be given, in them is deplorably bad; and attendance at many of them is scarcely, if at all, to be preferred to vagrancy or truancy in the streets."

*Liverpool.*—"The quality of the education is, on the whole, worse in the uninspected schools in Liverpool than in those of Manchester." "There are many more schools conducted in cellars and other filthy places, and such schools contain a much larger proportion of the school-going population than in Manchester." "A private school, conducted in a cellar. This cellar has two parts, front and back. The front cellar is approached from the street by a flight of stone steps, and is lighted by a small window below the level of the street. It is paved with stone. . . . The back cellar is not lighted at all, or, apparently, paved or floored in any way. In these two cellars the master says he has sometimes had as many as 80 children collected. . . . Among the 17 children (present at my visit) were only 10 books, and 6 of these were of a different sort. There was only one slate in the school, and no copybooks." "A private school conducted in a cellar, floored with stone. While the master was teaching, his wife was washing clothes in the middle of the room."

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IV.—BILLS REFERRING TO ELEMENTARY EDUCATION IN ENGLAND AND WALES, INTRODUCED INTO PARLIAMENT, 1843-1870.

- 1.—THE EDUCATION CLAUSES (as amended by the Committee) of a Bill for regulating the employment of children and young persons in factories, and for the better education of children in factory districts, in England and Wales, May 1, 1843. (Sir Robert Peel, Prime Minister; Sir James Graham, Home Secretary.)

49. And whereas it is necessary that means should be taken to provide proper schools in places where children reside who are employed in factories, so that the children may receive a religious and useful education; be it enacted, That every school which shall be formed under the provisions of this Act, or in which the constitution and regulations as hereinafter provided shall be adopted, shall receive and educate any of the children resident in the district assigned to such school, but the children employed in factories in such district, or the children of any family, part of which family may be employed therein, who may be sent thither by their parents, shall be received in preference to other scholars, so long as the school-fees for such children shall be duly paid; and such school shall be under the management of the trustees to be appointed in the manner hereinafter directed.

50. And be it enacted, That when the school shall be intended for a place for which there shall be only one officiating minister, such minister and the trustees hereinafter provided, shall be the trustees of the school, such minister being termed the clerical trustee; and when there shall be two or more ministers officiating in any such place, or where the school shall be intended for two or more, or parts of two or more ecclesiastical districts, the bishop of the diocese within which such school shall be situated shall from time to time, as occasion may require, appoint from such ministers, or from the ministers officiating in the several districts, one to be the clerical trustee of the school, who shall hold his office as such trustee so long as the said bishop shall deem proper, and so long as he shall continue to be a minister officiating in the said place; and the said bishop shall forward the appointment of the clerical trustee to the returning officer hereinafter provided, until the first board of trustees shall have been formed, and afterwards to the trustees of the said school; and the clerical trustee shall, at the time when the said trustees of the school hereinafter provided shall be elected, appoint in writing some person, being a churchwarden of or in the place for which the said school shall be intended, or being a person qualified to be elected a trustee, as hereinafter provided, to be one of the trustees of the said school, and shall send the appointment to the returning officer or the trustees of the said school.

CLAUSE (C).  
Appointment  
of the Clerical  
Trustee.  
One Trustee  
to be appointed  
by him.

Clause (D) 51. Provided that the Justices at the Petty Sessions should appoint Returning Officer at first election and trustees afterwards. Clause (E) 52 provided that substitutes to a certain amount should elect one trustee. Clause (F) 53 provided that the ratepayers should elect four trustees. Clause (K) 57 defined the qualifications of trustees, and clauses 59 and 61 the duration of their office and the order of their meetings.

The following clauses defined the powers of the trustees, and the nature of the religious instruction to be given in the schools, with a conscience clause and provision that the trustees should appoint a day



in which scholars, withdrawn from the "special" religious instruction of the school, might receive religious instruction from their own minister or from any person appointed by him. Provision is also made for the school to be open on Sundays for scholars who were members of the Church of England and whose parents desired them to attend.

The powers  
of the  
Trustees of  
the School.

62. And be it enacted, that the trustees shall determine the hours during which the school shall be kept open, so, however, that the children employed in factories shall be enabled to attend, as hereinbefore provided; and shall determine the amount of the school fee, so that nevertheless it shall not exceed 3d. a week for any child employed in a factory, the employment of each class, during every hour of the day, the books and apparatus to be used in the said school, the number and times of the holidays which, exclusive of any holidays on any of the usual fasts and festivals of the Church, shall not exceed three weeks in each year, except with the consent in writing of an inspector, the appointment, suspension or dismissal of the master or his assistants, their remuneration, and every question relative to the discipline and management of the school, and when three trustees concur therein. the dismissal of any child therefrom for misconduct: Provided always, That the appointment of the master shall not be val'd unless the bishop of the diocese approve thereof: Provided also, That if any trustee at an ordinary meeting make complaint in writing that the books selected by the trustees, and used in the school, are objectionable for reasons expressly set forth, or that within the space of two months previously to such meeting, the constitution and regulations of the school in this Act prescribed have been departed from in some essential particular, or of any matter relating to the conduct of the master or of any assistant master, and that such complaint do set forth distinctly the special cause of complaint, the trustees shall be specially summoned in the manner hereinbefore set forth to meet within ten days to consider the complaint, and at such meeting shall decide thereon; and if any trustee of such school shall not be satisfied with their decision, he may, within fourteen days thereafter, appeal to the Committee of Council on Education, who may inquire into the matter of the complaint, and their decision shall be binding on the said trustees, who are hereby required to conform to any order given by the said committee, touching the matter referred to them, or to dismiss the master or any assistant master of whom such complaint shall be made.

What Reli-  
gious In-  
struction  
shall be given  
at the School.

64. And be it enacted, That the master of every school to be provided for the education of children, under any of the powers of this Act, shall be required to teach the Holy Scriptures, in the version appointed by law to be used in churches, to such scholars as shall be of proper age to learn the same, and shall teach from no other book of religion whatever (except as hereinafter provided), and such teaching of the Holy Scriptures shall be conducted by and under the immediate direction of the said master; and at the opening and the close of school, daily, the master and scholars shall join in Divine Worship, using no other prayer than the Lord's Prayer, and the master shall read some passage of the Holy Scriptures: Provided, That if the parent of any child being a Roman Catholic shall notify to the trustees that, on the ground of religious objection, he desires that such child may not be present at such teaching or reading of the Holy Scriptures, nor at such Divine Worship as aforesaid, he shall not be required to be present at such times, but shall be employed in any matter of instruction not religious in a room apart.

When such  
Religious  
Instruction  
may be given  
from the  
Catechism  
and Liturgy,  
and to whom.

65. And be it enacted, That religious instruction shall be given by the master to the scholars of every such school, save as hereinafter excepted, in the catechism and such other portions of the liturgy of the Church of England as by law established as the clerical trustee may appoint, at such periods not exceeding one hour in the same day, nor three hours in each week for each scholar, as the trustees may select: Provided always, That the building of every school established and regulated according to the provisions to this Act, shall be so constructed as to contain at least one class-room, separate from



the general schoolrooms, and that such scholars as aforesaid shall be so instructed in a room apart from those scholars whose parents desire they shall not be present at such religious instruction; and that the time selected for such religious instruction shall be the hour immediately after the opening or immediately before the close of school in the morning or in the afternoon; and the mode in which such religious instruction shall be given by the master shall be determined by the clerical trustee, and the books which may be used for that purpose shall be selected by the Archbishops of both provinces; and it shall be lawful for such clerical trustee, or for such other person as he may appoint, at such periods, to instruct, catechise, and examine such children, as he may deem it advisable, except as hereinafter provided, in the principles of their religion, and to commence and close such instruction with such prayers from the Liturgy as he may select: Provided also, That no inspector of schools shall inquire into the religious instruction which the clerical trustee is authorised to give or to direct to be given in such schools, nor into the religious instruction authorised by the trusts of the deed of conveyance, or endowment to be given under the direction of a minister of the Established Church in any other schools, nor examine the scholars in such religious instruction, nor make any report thereon, unless he receive authority for that purpose from the archbishop of the province, or from the bishop of the diocese.

66. And be it enacted, That if the parent of any scholar shall notify to the master or trustees that he desires that such scholar may not be present at the periods when such catechism or portions of the liturgy are taught as aforesaid, it shall not be lawful for any person to compel such child to be present at such periods, nor to punish or otherwise molest such child for not being present; and it shall not be lawful for the trustees or master of the said school, or any other person, to give or permit to be given in the said school any religious instruction to such scholar, except the reading and teaching of the Holy Scriptures as hereinbefore appointed; and such child shall at the periods when such catechism or portions of the liturgy are taught as aforesaid be instructed in some other branch of knowledge taught in the school.

Provided that if the Parent object, no Child shall be compelled to attend the Religious Instruction.

67. And be it enacted, That the trustees of the school shall appoint a day in each week, to be approved by the Committee of Council on Education, in which any scholar whose parent desires he may not be present when such catechism and liturgy are taught as aforesaid, may, during three of the usual school hours, receive religious instruction from the licensed minister of the chapel in which such parent attends divine worship, or from any person whom such licensed minister may appoint; and any such scholar shall be permitted to attend such instruction whenever his parent shall notify to the trustees that such licensed minister, or the person appointed by him, will be present at the time so appointed in each week as aforesaid, at some convenient place other than the school-house, in order to give such religious instruction to such child.

CLAUSE (O). Trustees to appoint a day in which such Scholars may receive Religious Instruction from their own Minister, or from any person appointed by him.

68. And be it enacted, That the master and such other persons as the clerical trustee may appoint shall, on Sundays and on Christmas Day and Good Friday, at such times and under such regulations as the clerical trustee may direct, open and attend such school for the purpose of affording religious instruction to members of the Church of England according to the doctrines and principles thereof, and shall give such instruction to every young person who may wish to attend school at those times, and to every child whose parent shall desire such attendance; and such master shall cause every child and young person not prevented by any reasonable impediment, who shall receive the religious instruction at the said school, on such days as aforesaid, to attend under the care of the master the Divine worship of the Church of England, at least once on every such day at the church or chapel which the clerical trustee may select, or at the said school if the clerical trustee cannot select any convenient church or chapel where there is adequate accommodation for such children and young persons, and will provide Divine worship in such school for the benefit of such children and young persons.

CLAUSE (P). School to be open on Sundays for Scholars who are Members of the Church of England and whose Parents desire them to attend.

Clause 70 proposed to give powers to trustees of other schools to obtain the benefits of the Act, and Clause 71 that schools hereafter erected should also be allowed to come under its provisions. The Committee of Council on Education was to define boundaries and limits of contribution. (Clause 72) Loans for deficiency of amounts required for the enlargement or erection of school buildings was to be obtained from the Commissioner of Loans for Public Works, on a certificate from the Committee of Council on Education, to an extent not exceeding one-third of the total estimated cost (Clause 74).

These proposals excited great opposition in the country, especially among Nonconformists, who regarded the scheme as unduly favourable to the Church of England. During the discussion in the House of Commons, Mr. Roebuck moved that "in no place of education, maintained and enforced by the State, should any attempt be made to inculcate peculiar religious opinions; because, as such an attempt would be considered a plan for maintaining and strengthening an undue superiority in one sect over all others, the animosities and strife already existing among different religious denominations would thereby unhappily be greatly increased, and the cordial co-operation of all sects and denominations, which is absolutely necessary to secure the success of any plan of public education, rendered impossible." This motion was lost by a majority of 96 (ayes, 60; noes, 156).

The Government subsequently withdrew the scheme.

## 2.—THE EDUCATION BILL INTRODUCED 7TH APRIL, 1853.

Councils of boroughs might, by resolution of a majority of two-thirds of the members present at a meeting, adopt provisions of the Act (clause 1). On adoption, council to appoint a school committee to consist of not less than nine or more than 25 members. The committee might include non-members of the council, resident in borough, to extent of one-half its whole number. Members to be elected annually, and to be re-eligible (clause 3). School committee to make bye-laws, subject to approval of Committee of Council on Education (clause 6). Schools in receipt of, or eligible for receipt of, grants from Committee of Council on Education to be admissible to benefit of the Act (clause 7). Such schools to be admitted to benefit of the Act on written application of managers (clause 8). In any school so admitted, parents to have right to withdraw child from religious instruction (clause 10). Admitted schools to be inspected every year by some inspector authorised by Her Majesty (clause 12).

Quarterly lists of scholars in attendance to be sent by managers to school committee (clause 13). School committee to pay to managers, in respect of attendance for not more than 48 weeks in year, 2*d.* a week for every boy, and 1½*d.* for every girl, attending the school, for whose education not less than 3*d.* and 2½*d.* respectively shall have been received from subscriptions, payments by guardians, endowments, or school fees, provided that not less than 1*d.* is received from parents (the total of such payment not to exceed 6*d.* a week), or more than 2*d.* from the guardians (clause 14).



School committee might allow sums towards establishment of evening schools (clause 17). Seven-tenths of money received under the Act, and of payments, to be applied in the payment of teachers' stipends (clause 18). Managers to keep accurate accounts, and to send abstracts to school committee (clause 20). Any admitted school, ceasing to observe regulations of Committee of Council on Education, to lose benefit of the Act (clause 22). Schools refused admission to benefit of the Act to have appeal to Committee of Council on Education, whose decision was to be final (clause 24).

Expenditure incurred under Act to be defrayed out of borough fund. Separate rate might be levied for the purpose. Amount to be expended not to exceed produce of rate of 6*d.* in £ (clause 25). School committee to certify to town council amount required for payment. The accounts of the school committee to be open to inspection of members of the town council and of ratepayers (clauses 26 and 27). Where no appeal could lie to Committee of Council on Education, aggrieved persons given right of appeal to quarter sessions (clause 29).

The Education Bill was introduced in the first session of Lord Aberdeen's Coalition Ministry. It was part of a far-reaching educational policy. Lord John Russell, in introducing the measure into the House of Commons on April 4th, 1853, expounded the plans of the Government with regard to public instruction. Their scheme was in four parts, viz. : (a) the Elementary Education Bill, (b) a measure dealing with the administration of charitable trusts, (c) the constitution of the Department of Science and Art, and (d) University reform on the lines recommended by the Oxford and Cambridge Commissions.

Lord John Russell went at great length into the problems of public elementary education.\* He declared that the aim of the Government was "rather to strengthen and improve the system of education, which has "grown up chiefly by voluntary effort, than attempt to set up anything "in its place," which, while disturbing the existing system, might fail to do the work so economically and well. The Government were against secular education, and thought that there should be "a system of religious "training in the schools, and that religious training should comprise all "the great doctrines of Christianity." The Government had framed a scheme for rate-aid for schools. Lord John Russell thus expounded its principles:—

"There is, however, with respect to the general establishment of one scheme—supposing it were to be supported by a rate—this difficulty, namely, that there is a strong repugnance to the imposition of rates for objects in which the whole community cannot concur. There would therefore be, as was very correctly stated by the right hon. member for Midhurst (Mr. Walpole) last year, constantly occurring something like that agitation which often prevails on the subject of church rates, if you were to seek to establish a school rate in every parish. There is, however, it appears to us, one sort of community in this country which might obtain the means of supporting schools by means of rates. I allude to those towns which have a corporate organisation, which, under Acts of Parliament, and by ancient charters, have a corporate council, which can manage through municipal insti-

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\* See Hansard, vol. 125, pp. 522-579.



tutions the concerns of the town. In towns of this kind no necessity exists for establishing schools of one description only. There are generally in these corporate towns schools of various communities, all of which receive some support under the Minutes of the Committee of Privy Council, or which might receive that support. It appears to us, therefore, that it is possible, at all events, to give the power to the municipal councils of such towns to vote a rate for the purpose of improving the education in such towns. But in so doing we should think it necessary to impose certain conditions in order to prevent the evils to which I have referred. In the first place, we think it would be right that not less than two-thirds of the town council should agree to the imposition of such a rate. If it were carried only by a small majority it would give rise to incessant attempts to overturn that vote, and probably create great dissensions in the locality. When, however, two-thirds of the representatives of the community would give a vote in favour of the imposition of the rate, their decision would probably be in accordance with the general sense of the town. In the next place, we should also think it necessary to provide that the rate should be applied, not to establish schools in substitution of former schools, but in aid of the voluntary efforts of individuals, and in aid of the school pence given by the parents. We should propose some such scheme as that the rate should be applied to pay 2*d.* in the week for each scholar, provided 4*d.* or 5*d.* were contributed from other sources. We should, perhaps, also insist that the schools which should receive that assistance should be schools which, under the Minutes of Council, might receive assistance. I should be afraid of very great difficulty and dissension occurring if we were to go beyond rules of this kind; and this opinion is founded upon what has occurred at Manchester during the past year. It is well known that a number of gentlemen, most benevolent, and entitled to the highest praise for their exertion, assembled together to establish a rate for the purpose of improving the education of Manchester. When they endeavoured to collect the opinion of that city, a very great number of the rate-payers—there is some dispute as to whether it was a majority, it appeared at least to be a majority—willingly assented to the principle of a rate. When they came to consider what kind of schools should receive assistance from the rate, they had no difficulty, I believe, so long as they confined themselves to the schools which under the Minute of Council might receive assistance. But when they endeavoured to frame a scheme of their own, for new and other schools, they were met by the argument that all should receive the benefit of assistance." \*

Mr. Ewart followed, giving the measure his warmest support. He hoped that some day there would be a general education rate all over the country. Mr. Hume, on the contrary,

"did not approve of the partial system now proposed. He would rate every parish in the kingdom, every acre in the country, in order to instruct the people in their moral and social duties and to render them good citizens, and he would leave it to the various clergy of the different sects to instruct their people in religion."

Mr. Milner Gibson said that "inasmuch as he was engaged with other members of that House in an inquiry before a committee into the practicability of supporting schools of a denominational character by means of rates in towns which were governed by municipal corporations,—inasmuch as that committee was engaged in investigating the precise question which the noble Lord had propounded to the House that evening, he would say, with all respect, that he could have wished the Government should have delayed legislating upon that particular branch of the subject until that

\* Hansard, vol. 125, pp. 536 *seq.*

"committee had presented its report. He was so anxious that something "should be done for education that he was extremely unwilling to throw "obstacles in the way of any plan for promoting it; still he doubted very "much whether they should succeed in the attempt to transfer as it were "the duties of the clergy of various persuasions to the schoolmaster. He "very much doubted whether two-thirds of a town council would be found "to agree to teach all forms of religion in their respective towns, and to "support such teaching out of the rates. He doubted whether town councils "would consent to train up children in the Jewish religion, the Roman "Catholic religion, and the various forms of Christianity."

Mr. W. J. Fox "was very glad indeed to find that the noble Lord had "recognised the principle of an educational rate: he thought it a most im- "portant step in the progress of public instruction. But much of the virtue "of a rate for education would depend upon its being generally levied, and "distributed according to recognised and impartial principles. Unless this "were the case, they would but introduce into boroughs the struggle which "prevailed amongst religious sects and educational associations, and add "another item to that great mass of antagonism which caused so much "disturbance and confusion from time to time in our social system. They "would be throwing down a prize of public money in a borough for the "different sects and denominations, churches and religions, and school bodies "to contend for, as they assuredly would contend, and that in a manner "which would in some sort desecrate education by mixing it up with the "topics of political strife."

"The term 'secular education' had been made a perfect bugbear in this "country. The notion had been run away with that there was a set of "persons who wished to exclude religion from the training of the children of "this country. Such a notion did not argue so much wrongheadedness as a "total deprivation of the moral sense. He believed there were no such "persons amongst those who had been most forward in recommending what "was called the secular system. They were as thoroughly convinced as "others that there was no such thing as education without the religious "element; but the question was how that element was best to be infused. "They thought—and they were countenanced by His Grace the Archbishop "of Canterbury in thinking so—that the clergyman was a better trainer in "religion than the schoolmaster." The difficulty had been surmounted in "Ireland, Upper Canada, and the United States.

Moreover, he thought that "to make the application of national grants "most conducive to the improvement of education, remuneration should be "given, not in reference to the number of children or the mere amount of "attendance, but in reference to the attainment; that it should be the result "of something like an inquiry by the inspectors into what was actually "taught. Let all the schools retain their present denominational character "if they would, but if they were always rewarded in this way, if the amount "were proportioned to the amount of education actually realised in the "school, that would be a stimulus which would operate very strongly indeed "towards raising the character of education."

Finally, Mr. Apsley Pellatt expressed his "approval of Lord John Rus- "sell's proposition to transfer the control of the education fund from the "Imperial Government into the hands of the municipal bodies."

The Education Bill was then brought in by Lord John Russell and the Secretary for War.

Before the Duke of Newcastle's Commission on January 30, 1860, Sir James Kay-Shuttleworth gave a detailed account of the intention of the Education Bill of 1853, and of its reception in the House of Commons.\*

He stated that "the whole scheme of the Borough Bill was to be "that of a rate-in-aid of the existing system of administration. It

\* Duke of Newcastle's Commission Report, vol. vi., pp. 368-370.



"was conceived that one immediate effect of that Bill would be to give a great impulse to the extension of the Minutes of the Privy Council in the boroughs, first, by rendering the support of schools more easy, and then by promoting the increase of the number of schools in the towns, and consequently that the proportion of the public moneys administered under the Minutes of 1846 to boroughs would be thereby considerably augmented. The Government did not think that the agricultural districts were ripe for the introduction of a rate-in-aid. They thought it fair, therefore, as probably the amount of money obtained from the Consolidated Fund towards the towns would be increased by the borough assessment, to provide by a capitation grant for a further improvement of the schools of the agricultural parishes. They did not think that the agricultural parishes would in this way obtain a larger proportion of the moneys derived from the Consolidated Fund than the towns would by the improvement of their education."

Asked by Mr. Rogers why the Borough Bill failed, he replied :—

"The Borough Bill was rather coldly received in Parliament. It obtained very little support there, and little or no support from the boroughs. In fact, the idea of a rate-in-aid for the boroughs was new, and obtained very little sympathy. The provisions resembled likewise very closely indeed those of the Manchester Education Bill, and probably the same feeling existed with respect to the rate-in-aid under the Borough Bill as that which had existed with respect to the Manchester Education Bill, namely, that whilst the charge was very limited, there was very little accession of power to the municipality which had to administer the rate.

"(Rev. W. C. Lake.) When you say that the Bill was coldly received do you mean that there was an active opposition?—There was not an active opposition, but the measure was not very strongly pressed upon the attention of Parliament.

"And in consequence was it thrown out in Parliament or was it dropped?—It was dropped.

"(Chairman, Mr. N. W. Senior.) Was there any difference between the Bill as originally proposed and as actually brought in?—I do not think that there was any very serious difference.

"(Rev. W. C. Lake.) If the Bill was not actively opposed, can you tell us the grounds upon which it was dropped? I understood you to say that the Government had endeavoured to obviate the old objection to rates, namely, that it gave the ratepayers too great a hold on the administration of the schools?—This Bill did not give the town council any power over the individual schools beyond the protection of the conscience of the child and of the parent. The schools remained, as at present, under the management of the committees appointed by the congregation with which the school was connected.

"Did the Bill then give to the town councils no check whatever upon the expenditure of the schools?—The town council administered the grant *capitation*, according to the attendance of the children, and on the fulfilment of certain conditions, and had an ent're check in that respect upon the administration of the grant, but they had no power of interference with the management of the schools excepting to secure religious liberty.

"Mr. Lake (afterwards Dean of Durham) asked further questions as to the plan contemplated by the Aberdeen Government with regard to elementary education.

"Then it was contemplated that step by step they would be willing to bear more of the expense, and, as a consequence of this that step by step they would have a greater share in the administration of the schools?—Not in the administration of the schools. It was not contemplated that the administration of the schools should in any degree or in any particular, excepting as respected the protection of the conscience of the parents of the children, be confided to the town council, but that a certain part of the inspection as, for example, the examination of pupil-teachers, might be confided to the immediate direction of the town council subject to a control from the Privy Council Office.



"Was it at all foreseen to what point that administration so vested in the hands of the town council might go, and where it would necessarily stop? I mean was any limit foreseen beyond which the town council could not go in managing the school?—It is not possible to foresee a limit to interference of Parliament in any particular administration, but the limits defined in the then Bill were absolute, and it was intended in any successive Bill which might be introduced to fix positive limits to the interference of the town council. What powers Parliament might ultimately confide to town councils in relation to schools it was impossible to anticipate.

"But I understand you to say it was contemplated, though not laid down in that Bill, that there would be an advance in the power of the town councils in the points to which you have adverted; for instance, inspection?—By successive Acts of Parliament.

"Was it contemplated that that would be the limit?—It was contemplated that that would be the limit; that they would not be allowed to interfere in any way in the internal management of schools which would still be confided to the religious communions; but that the inspection would be to such an extent probably ultimately confided to the town councils, as that the examination of pupil-teachers might be conducted under their direction, and rules as to the condition of schools admitted to the participation of the rate made by them under the general control of the Privy Council Office.

"(Chairman, Mr. N. W. Senior.) How soon were the provisions respecting the capitation grant altered?—They were altered in the course of the year, and, in fact, before the Minute was carried into execution. The Minute passed in April; it was published and distributed in a letter dated August, and in August the Borough Bill had been withdrawn and the question had arisen in the interval whether the Capitation Minute should be carried into execution or not. In my own opinion, instructed rather by the event than what occurred at the time, it perhaps would have been wiser to have withdrawn the Capitation Minute then. I think that with respect to the agricultural parishes the reduction of the stringency of the regulations as defined in the letter of August 1853, was in the main well founded, and not unwisely done, and I am not sufficiently acquainted with the administration under that Minute from 1853 up to the present time, to say whether the Committee of Council have been able to fulfil their intentions of approaching more nearly, year by year, to the stringency of the original Minute. But I cannot hesitate to express to the Commission my opinion that it would be wise that the relaxations which were adopted in August 1853 should be gradually withdrawn, as was contemplated by the letter which was issued in August 1853. The Capitation Minute was not then extended to the boroughs; it has since been extended to the boroughs. I cannot acquiesce in the view which has been taken that it was impossible to avoid it; my own impression is that it was possible to avoid it, and I regard the extension to the boroughs as an error."

These passages show that the annual capitation grant from the Treasury in aid of rural schools was part of a large scheme, and was introduced as a solution of one part of the general problem, the rate-aid scheme being the proposed solution for the educational difficulty in boroughs. The capitation grant was introduced by Minute in April, while the fate of the Education Bill (embodying a rate-aid scheme) was still uncertain. The latter was withdrawn in August, and therefore only half of the Government plan was carried into effect. Owing to the failure of the rate-aid scheme, the capitation grant, though originally intended for non-municipal areas only, was extended to boroughs. The chief source of financial assistance to elementary schools thus became State-aid instead of rate-aid.

It is also clear that the rate-aid scheme was, for various reasons, unpopular. Among these reasons was the fact that it would have

required the towns to spend more from their own resources than the country districts,

### 3.—THE MANCHESTER AND SALFORD EDUCATION BILLS.

The education clauses in the Factory Bill, introduced by Sir James Graham as Home Secretary in Sir Robert Peel's Government in 1843, had aroused much discussion in Manchester. Those clauses were withdrawn in consequence of Nonconformist opposition, but local interest in the education question was again excited by the Minutes of the Committee of Council of August and December, 1846, and by the "management clauses" in the further Minute of June, 1847. Two societies were at this time established in Manchester for the furtherance of local education. The one was called the Lancashire Public Schools Association and in common with the National Public Schools Association, aimed at the establishment of a system of free schools to be supported by local rates and managed by local committees specially elected for that purpose by the ratepayers. These schools were "to impart secular instruction only, leaving to parents, guardians, and religious teachers the inculcation of doctrinal religion."\* To afford opportunity for such teaching, the schools were to be closed at stated times in each week. Denominational schools were to be allowed to come under the local committees and to be helped out of the rates, on condition (1) that they restricted the inculcation of doctrinal religion or sectarian opinions to fixed times, and allowed scholars to withdraw from such lessons, and (2) that they provided free secular education. "The payment from the rate" to such schools "would be simply for the secular part of the instruction; the religious teaching would be left entirely to voluntary effort."† The other society appears to have been called the Manchester and Salford Committee on Education. It regarded proposals tending to secular education with alarm and dislike. Its plan, accordingly, was to aid existing denominational schools by local rates. The rate, which was not to exceed 6*d.* in the £, was to be administered by the town council, but the latter was merely to be the custodian of the rate, and to act as a conduit pipe through which the rate-aid would flow to efficient voluntary schools.

The efficiency of the schools was to be determined by the inspection of the Committee of Council.

Both these societies prepared Bills. That, however, of the Manchester and Salford Education Committee was originally limited to those towns only. It was originally introduced into the House of Commons in the session 1851-52 by Mr. Entwistle, M.P. To some extent, each society gradually made concessions in deference to the criticism of the other. It was pointed out that the programme of the National Public Schools Association, so far as it related to the new schools to be established, might have the effect of encouraging purely secular education, through confining public aid and supervision to

\* Compare Rev. Dr. W. McKerrow's evidence before House of Commons Committee, 1853, Report, p. 2.

† *Ibid.*, p. 25.



secular instruction alone. It may be remarked that the feeling against secular schools was so strong, that in 1853 the Committee of Council, in reply to a memorial asking for aid to a secular school, stated that "education grants had not hitherto been applicable to schools exclusively secular, and that they believed that such a decision was in accordance with the views of the great majority of the promoters of education. Under these circumstances they had no intention of rescinding the rule on which they had hitherto acted."\* Accordingly the National Public Schools Association framed the scheme, above described, for the application of denominational schools to a public school system. On the other hand, the weak point of the original plan of the Manchester and Salford Education Committee was that it did not provide for the establishment, by public effort, of new schools in destitute districts where voluntary enterprise had failed to make adequate provision. The Committee therefore tacked on to their first scheme proposals for the establishment of new schools in such districts, on the prescribed condition that in such schools the Bible was to be read. This, however, in its turn, roused new opposition from Secularists, and from some Roman Catholics. It appears, therefore, that the compromises proposed by each society tended to estrange some of their most ardent supporters.

The Bills introduced by the societies were private Bills. They are not therefore to be found in the volumes of public Bills. As they represented conflicting theories, they were alike referred, on February 17th, 1853, to a Select Committee of the House of Commons. The Committee consisted of 15 members, and included Mr. Milner Gibson (Chairman), Mr. John Bright, Lord John Russell, Sir George Gray, Mr. Macaulay, Mr. Cobden, and Mr. William Fox. The reference to the Committee was "to inquire into the state of education in the municipal boroughs of Manchester and Salford, and in the contiguous townships of Broughton, Pendleton, and Pendlebury, and whether it is advisable to make any further provision, and if so in what manner, for the education of the inhabitants within such boroughs and townships." The Committee began to take evidence on March 7th, 1853. In April, Lord John Russell (a member of the Committee) introduced the Government Education Bill into the House of Commons. Accordingly, on April 12th, Mr. Peto moved that the conduct of the Government in introducing at the present moment a Bill on the subject of popular education into the House of Commons had materially altered their position and virtually taken out of their hands the subject of the inquiry committed to them; that it was therefore useless, and consequently undesirable, to prosecute the inquiry further, and that on these grounds the Committee thought it best to decline taking any additional evidence, and to report to the House the evidence already received. This motion was negatived, but after taking evidence on five subsequent occasions, the Committee decided, on Mr. Peto's motion, on May 26th, that "the evidence be reported, without any opinion thereon, to the House."†

\* Final report of Lord Cross's Commission, pp. 8-9.

† Report from Select Committee on Education (Manchester and Salford, &c.) June 6th, 1853, pp. iv-vii.



In the session of 1854 (the year of the Crimean War) the Manchester and Salford Education Bill was again privately introduced into the House of Commons. No report of the discussion appears to have been preserved in Hansard. But, from reference to it in the debate on the Education Bill on March 16th, 1855, it is known that it was defeated on an amendment to the second reading, moved by Mr. Milner Gibson, the member for Manchester. Sir John Pakington, in the course of the later debate, stated that the Bill was "rejected in consequence of a paltry quibble whether, according to the forms of the House, it was a public or private Bill. The noble lord the member for London made a short speech on that occasion, and left the House. The Treasury benches were empty, and the measure was discussed in the absence of, and without assistance from, Her Majesty's Government. In fact, throughout the whole session, Her Majesty's Government gave no intimation whatever of any intention to revive the question of education, and, as far as the House knew, it was totally thrown aside."\* Speaking later, however, in the same debate, Mr. Milner Gibson "felt bound to defend the course he took" in regard to the Bill, and did so in these words: "Though it is not unimportant whether measures of this kind are private or public, the reason why the Bill was defeated was that it did not meet with the concurrence of the Corporation of Manchester, who represented the great body of the ratepayers. When a private Bill is introduced into the House, which would tax a locality contrary to the wish of the great majority of the taxpayers of the locality, whom in this case I represent, I feel that I should be most legitimately discharging my duty in opposing its progress."†

#### 4.—THE BILLS OF THE SESSION OF 1855.

In the session of 1855, a revised Bill, incorporating the former scheme of the Manchester and Salford Education Committee, was introduced on March 16th, by Sir John Pakington, Sir Edward Bulwer Lytton, and Mr. Adderley, and discussed as the Education (No. 2) Bill. And in the same session the views of the National Public Schools Association were embodied in the Free Schools Bill, prepared and brought in on March 29th by Mr. Milner Gibson, Mr. Cobden, and Mr. Headlam. Lord John Russell also introduced a Bill which became the Education (No. 1) Bill of the session.

(A.) This happened as follows:—At the beginning of the session, Sir J. Pakington gave notice of a motion to introduce a Bill proposing rate-aid to elementary schools. His motion was down for January 25th. On January 23rd, Lord John Russell announced, somewhat unexpectedly, that he intended to bring in an Education Bill, which was actually introduced "in order that the people of the country might see the objects it proposes to attain"‡ on February 8th, and read a first time without debate. It thus became the Education (No. 1) Bill of that session.

\* Hansard, vol. 137. House of Commons, March 16th, 1855, p. 642.

† Hansard, vol. 137, pp. 690 and 691.

‡ Lord John Russell's introductory remarks, Hansard, vol. 136, pp. 1378-1379.

This Bill proposed to enable the council of any borough in England to submit to the Committee of Council on Education "a scheme for the "promotion of education in such borough, whether by establishing and "maintaining a new school or schools, or by aiding any existing school "or schools" (clause 1). The adoption of the Act was to require the vote of two-thirds of the whole council (clause 2). The expenditure incurred under the Act was to be chargeable to the borough fund, but not to exceed a rate of 6*d.* in the £ (clause 3). The Act might also be adopted in parishes after a requisition of ratepayers (clause 7) and poll (clauses 8 to 12). In case of such adoption, the vestry was to submit a scheme to the Committee of Council on Education (clause 16), and the expenses incurred under the Act were to be defrayed out of the poor rate, with a limit of 6*d.* in the £ (clause 17). In all schools authorised by a borough council or vestry, or established by them, or under their authority, the Bible was to be read "as part of the reading therein, "but was not to be used as a school lesson book"; and the children of Roman Catholic or Jewish parents were not to be obliged to be present at such reading (clause 18). Unless their parents desired otherwise, Nonconformist, Roman Catholic, and Jewish children were to be released from learning the Catechism or using the Liturgy, or attending church or other religious observance in any school authorised or established by the council or vestry (clause 19), but clause 20 ran as follows:—

"The council of any borough and the vestry of any parish acting under this Act shall have, by themselves or by such school committee as they may appoint, the *entire management, direction, and superintendence of the schools to be established or aided under this Act* by such council or vestry, subject to the rights of any trustees or special visitors of such schools; but all schools established or aided under this Act shall be subject to the inspection of any inspectors appointed by the said Education Committee" (*i.e.*, the Committee of Council on Education).

The Bill shows signs of hurried drafting. Clause 19 clearly contemplates the continuance of the fully denominational character of many schools, not only among those to be aided, but even among those to be actually established by the borough councils and vestries. But clause 20 vests the entire management and direction of all aided schools (including, that is, the appointment of the teachers, and the determination of everything beyond a certain minimum of religious teaching in the curriculum) in the hands of those local authorities. It was held by some that this did not offer much hope for the fair treatment of all denominational schools in certain districts. The framers of the Bill apparently relied on the action of the Committee of Council, to whom all schemes had to be submitted for approval, and by whom such schemes might at any time be revoked (clauses 3, 4, and 21). But it was replied that the interference of the central authority in such a delicate matter as the distribution of the rate among schools of different denominations might lead to serious conflicts of opinion.

(B.) On March 16th, 1855, Sir John Pakington introduced his measure, which went by the name of the "Education (No. 2) Bill."



This Bill was practically the Manchester and Salford Education Committee's original Bill, with the provision for the foundation of new schools added to it. With some misgivings Sir John Pakington made his Bill permissive.\* The areas within which it might be operative were, in corporate towns, the limits of municipal jurisdiction, and, in the country, the limits of the poor law unions. It was optional to the ratepayers of each district whether they would adopt the Act (clauses 1, 2, and 3). The Public Libraries Bill gave a precedent for means of collecting votes on the point. Where the Act was adopted the school committee for the town or union was to be directly elected by the ratepayers (clauses 4 to 14). The success of the poor law arrangements, and the experience of the United States, were cited by Sir John Pakington as a chief reason for adopting this election. The resident magistrates of a borough, or county magistrates resident in a union or parish, adopting the Act, were to be ex-officio members of the school committee (clause 18). The school committees were to be elected annually (clause 15). They were to have the power to levy an education rate, to be paid out of the borough fund or poor rate, but not to exceed 6*d.* in the £ (clause 57). A school committee, however, was to have power to borrow money on the security of the rates (clause 58). The byelaws and regulations of all school committees were to be submitted for the approval of the Committee of Council on Education (clause 19). Sir John Pakington expressly saying that "the boards were to act under "the general superintending authority of the Central Education Department as boards of guardians act under the Poor Law Commission."† The analogy between the administration of the education and the poor laws was intentionally complete.

Sir John clearly stated his conviction that "by the voluntary principle "alone we cannot educate the people of this country as they ought "to be educated; you can no more do it than you can carry on a great "war or defray all the annual expenses of the Government by a voluntary "contribution instead of taxation. . . . We cannot go on as we "are. The voluntary system has broken down. It is harassing and "vexatious, and the only legitimate mode in which you can provide "education for the people is by calling on the people to contribute a "rate for it."‡ The plan of the Bill, therefore, was that, "where the "locality is called upon to provide a certain amount of rate, the public "fund of the country shall contribute a fixed proportionate amount."§ In clause 56 it was declared that moneys voted for school purposes under the Act were to be paid in moieties from local rates and the Parliamentary fund. As, however, Sir John Pakington had felt constrained to make his Bill permissive, he had to provide for cases where there would be no local rate, and this he did by adding to clause 56 a proviso that the Committee of Council was to be free to make grants for any object and on any conditions which they might think fit. This was a "loose end" in the texture of the Bill, and a cause of weakness.

\* Hansard, vol. 137, p. 658 (Sir John Pakington's speech).

† *Ibid.*, p. 659.

‡ *Ibid.*, pp. 660, 661.

§ *Ibid.*, p. 661.



Schools in connection with every denomination then recognised by the Committee of Council were, wherever they existed, to be equally entitled to claim the benefit of the rate, subject to the "important and indispensable condition that no child should be excluded from any school on account of his religious creed"\* (clause 25). In the case of new schools to be established by the local authorities, the religious teaching was to be in accordance with the religion of the majority of the persons in and for which the schools were to be established (clause 50). Sir John Pakington thus stated his policy:—

"If the majority of any district in which a school is erected should be in connexion with the Established Church, the teaching in that school will be in accordance with the religious doctrines of the Church, subject to the rule that dissenting children shall be admitted without being compelled to receive instruction in Church doctrines. If, however, the majority of a district in which a new school is established should belong to any other religious creed, I would respect the feelings of that majority, and I propose that the religious teaching should be in accordance with the creed of the majority, subject to the rule that all scholars belonging to the Established Church or to any other denomination in the district should be received into the school. But, to avoid local disputes and struggles, I shall propose that in all such cases the religious teaching of the school shall be decided by the Committee of Council for Education."†

Sir John defended this proposal by a series of references to the arrangements in force in the United States, in Austria, Switzerland, and France.

An important feature of Sir John Pakington's measure was its proposal that all the new schools to be established by the local boards should be free‡ (clause 44). Existing schools, aided by the boards, were to receive as free scholars children sent and paid for by a so-called "registering" or sub-committee of the local education authority (clauses 28 and 30).

All schools enjoying the benefit of the Act were to be inspected at least once a year by an Inspector authorised by the Committee of Council on Education (clause 31).

A long debate ensued on the Bill, both on the first reading (March 16th, 1855), and again on the motion for the second reading (May 2nd, 1855), the discussion on the second occasion being resumed on June 11th, and again on July 2nd.§ The chief arguments used against the Bill may be summarised as follows:—

- (1.) That there should be no compulsory tax for education. Voluntary effort was sufficient.
- (2.) That the permissive character of the Bill would result in the continuance of educational destitution in those very parts of the country where there now exists, owing to the apathy of the residents, a dearth of schools. One speaker said that "if

\* Hansard, vol. 137, p. 666.

† *Ibid.*, p. 667.

‡ Compare, for reasons of this, *Ibid.*, p. 662.

§ *Ibid.*, vol. 137, pp. 672-699, pp. 2112-2160; vol. 138 pp. 1784-1828; vol. 139, pp. 383-388.

"people were not generous enough or rich enough to subscribe for the building of a school, he doubted very much whether they would be generous enough or rich enough to impose a rate on themselves for that purpose."

- (3.) That in the case of new schools, religious minorities, though taxed for the support of a school giving religious instruction according to the tenets of the majority, would themselves have perforce to go without any aid for the religious teaching they themselves preferred.
- (4.) That the Bill proposed what might end in secular education. Dissentients might, in some cases, withdraw half the children from the religious teaching of the school, and then religious teaching would cease altogether. One member said: "The schools would be thrown into the hands of those who despised dogmatic instruction, and slowly by degrees the instruction given would be reduced to the colourless teaching advocated by the friends of the secular system. He deprecated anything that could tend to confuse the outlines of belief—that attempted to unite sects that were irreconcilable to each other; and still more anything that would give the children the impression that the religious points set aside in the schools were unimportant points, not worth fighting for—open questions to be believed or not. The result of the system of teaching as proposed would be to make England a nation of infidels."<sup>†</sup> This view was resisted by Mr. Adderley, who maintained that "the most material points were held in common by Christians of all sects, and that, so far from the spread of knowledge among the schools of all recognised denominations being likely to increase infidel notions, it would tend to bring the hostile camps more closely together, to clear away the mists which now intervened, and to extend and strengthen sound views of religious truth."<sup>‡</sup>
- (5.) That the Bill did not sufficiently separate religious teaching from the ordinary school curriculum. Mr. W. J. Fox said: "The school instructed; it did not educate. The entirety of education was far beyond the grasp of the schoolmaster. There were very serious objections to making the schoolmaster the religious teacher. The schoolmaster if he was set to teach religion) filled the position of a species of missionary. The whole of our schools were so closely connected with the various religious denominations that that very fact must necessarily tend to keep down the intellectual standard of the instruction imparted."<sup>§</sup>
- (6.) That the Bill would still further embarrass education with the religious difficulty. Mr. Milner Gibson said that "it involved

\* *Hansard*, vol. 137, p. 685.

† *Ibid.*, p. 695.

‡ *Ibid.*, pp. 685, 686.

§ *Ibid.*, p. 689.

"the teaching all religions, and every conflicting form of theological opinion, at the public expense. The sincere religious world would not consent to such a plan. If public education were to be supported by taxes and rates, they preferred that it should not go beyond secular teaching, and that religious instruction should be imparted by other means and in other ways."\* The Bill would compromise the interests of Protestant minorities in Catholic districts. Mr. Dillwyn declared that its operation would be disastrous in South Wales, where the Church schools were supported by the moneyed classes, and the education given in them was not acceptable to the population generally.

- (7.) That Sir John Pakington's quotation of American practice was misleading. American education was becoming purely secular. (Mr. Henley.)
- (8.) That the Bill connected education too closely with Poor Law machinery. "By establishing boards constructed like boards of guardians, it would render the measure unpopular and distasteful to the poor . . . who would feel that they were branded like paupers." (Mr. Henley.)†
- (9.) That the Bill would impose too great a burden on the real property of the country. (Mr. Henley.)
- (10.) That rate-supported and voluntary schools cannot co-exist. It would lead to the inevitable destruction of the schools of religious communions. (Mr. Henley.)
- (11.) That the provisions in regard to the establishment of new schools were unnecessary and undesirable.
- (12.) That the Bill would import into education the church rate difficulty. "The education rate would soon be regarded as a religious grievance. It was assuredly calculated to excite religious differences and party contention, and, as if to prevent the return of peace to harassed communities, it was provided that the rate should be proposed every year."‡

(c.) The Free Schools Bill. This embodied the views of the secular education party of Manchester.

It proposed the establishment of a "Board of Public Instruction for England and Wales" as a central educational authority with the duty of superintending the execution of the Act and of "from time to time obtaining as much new information as may be concerning the nature and amount of instruction of the people in this country and in other countries" (clause 24). The Board was to divide the country up into "districts" each a parish, township, poor law union, or city or borough (clause 4). The ratepayers in a district (unless they postponed the operation of the Act, under clause 5) were to elect a "school committee,"

\* Hansard, vol. 137, p. 691.

† *Ibid.*, p. 2140.

‡ *Ibid.*, vol. 138, p. 1797.



half of the members of which would retire annually (clauses 6 and 7). The school committee were to establish, according to the need of their district, day, evening, infant, and industrial schools (clauses 1 and 14). They were to appoint and pay all teachers in the schools in their district (clause 15). All such schools were to be free (clause 3). Distinctive doctrinal religion was not to be taught in the schools, but "in order to afford the pupils the opportunity of voluntarily attending the instruction of teachers of religion, the committee of each district shall set apart certain hours in every week, not exceeding one-fourth of the time devoted to general instruction, during which the schools shall be closed for the purposes of the Act" (clause 2).

Existing schools might (a) be purchased by the committee and converted into free schools by consent of the managers or trustees, who should not be liable to the charge of breach of trust and should have the right to give religious instruction in the schools on Sundays and during the hours when the school was closed for the purpose of allowing the pupils to attend religious instruction (clause 17), or (b) remain under the management of their present managers or trustees, and might then receive grants from the school committee on condition that the inculcation of distinctive doctrinal religion did not take place on any weekday between 9 and 11 a.m., and 2 and 4 p.m. (clause 16).

The school committee might levy school rates to be collected by the overseers (clause 18), and establish training schools in which no distinctive doctrinal religion or sectarian opinions might be taught (clause 23).

(n.) Fate of the three Bills. On July 2nd, 1855, Sir J. Pakington moved that the order of the day for the adjourned debate on the second reading of his Bill (Education (No. 2) Bill) be discharged. He explained that there was no chance of full, "close, and consecutive discussion of the Bill" or of its passing into law. The Bill was therefore dropped.

On the same evening, Mr. Milner Gibson withdrew the Free Schools Bill, and Lord John Russell also announced that "the Government wished to take time to consider the whole subject, though they fully contemplated renewing a measure next session based on the rating principle." The Education (No. 1) Bill was therefore abandoned on the same night.

The discussion showed that public opinion was too divided to allow any settlement of the education question to be made. No Bill was introduced by the Government in the following session.

##### 5.—THE BILLS OF 1856 AND 1857. MOVEMENTS IN OPINION, 1856-67.

###### THE DUKE OF NEWCASTLE'S COMMISSION (1858-1861) AND THE REVISED CODE.

Parliamentary attempts to settle the education question had for the time failed. The Bills introduced by Lord John Russell in 1856, and by Sir John Pakington in 1857, were no more favourably received than their predecessors had been in 1855.\* Meanwhile, however, the work of the Committee of Council on Education was steadily growing. The

\* Hansard, vol. 148, 1194.

grants voted by Parliament increased year by year. From £263,000 in 1854, they rose to £396,921 in 1855, to £451,213 in 1856, to £541,233 in 1857, and to £663,435 in 1858. It was clear that national education must henceforth largely rely on public funds. The old ideal of purely voluntary enterprise was rapidly fading away. The party which felt the urgent need for some more comprehensive scheme of elementary schools grew year by year in numbers and influence. But questions of fundamental importance still remained unanswered. The nation had not made up its mind as to the future of elementary schools under private management, nor from what source, central or local, the national subsidies to education ought to be mainly drawn.

The future was regarded with misgiving by those who, like Sir John Pakington, while strongly advocating a general system of elementary education, desired that denominational schools should continue under denominational management. They realised that, if the work of those schools was to be made efficient and sufficient, they must receive larger grants of public money. The country, they thought, was drifting into a system of central grants, the operation of which would entail increasing pressure of Departmental control, a gradual diminution of local interest in, and liberality towards, education, and (as they feared) the eventual predominance of public management of all elementary schools. On the other hand, more ought to be done, and done quickly, if the children of the working classes were to be saved from the worst dangers of ignorance and neglect. The party which favoured secular education was ready to join with the section led by Sir John Pakington, in seizing every means of drawing public attention to the dearth of proper schools. Their ultimate objects might differ, but at this stage the two parties were agreed in demanding more information. Accordingly, they decided to press for a commission of inquiry into the state of popular education in England, and Sir John Pakington moved for the appointment of such a commission in the House of Commons, on February 11th, 1858. - Mr. Beresford Hope and others spoke strongly against the proposal, as tending to pave the way for a compulsory system of education. Mr. Henley and the Vice-President of the Council also opposed the original motion, but agreed to accept a modified form of it, which was carried by a majority of 61. The change in the motion was of only verbal importance. Its acceptance marked the growing strength of the movement for educational reform.\*

In their report, published in 1861, the Commissioners acknowledged that they were "divided by deep-seated differences of opinion with regard to the duty of the Government towards education."† The minority of them thought that "public interest in the subject having been thoroughly awakened, Government should abstain from making further grants, except grants for the building of schools . . . and that the annual grants now made should be gradually withdrawn."‡ That is to say, on various grounds, both social and economic, they desired to rely in the future mainly on private enterprise and munificence for

\* Hansard, vol. 148, pp. 1184-1249.

† Report of Duke of Newcastle's Commission, vol. i., p. 297.

‡ *Ibid.*, p. 299.



the conduct and development of elementary education. Such a course would obviously have safeguarded the position of the denominational schools. But the majority of the Commissioners held a different opinion. They were convinced that it was desirable that the State should continue to make large grants towards education, partly because such grants had already improved the schools, partly because there was still "no prospect that the poor would be able, by the assistance of charitable persons, to meet the expense of giving an education to their children."\* Accordingly, the minority of the Commissioners deferred to the opinion of the majority. "On the rejection of their own view, they cordially adopt, in the second resort, the scheme of assistance approved by the majority of their colleagues, which they regard as better in every respect, and above all a far nearer approach to justice, than the present extremely partial system."† The apparent unanimity of the Newcastle Commission thus veiled grave differences of opinion. "Universal occurrence," the report states, "was not to be expected, and has not in fact been obtained."

In the Commission, therefore, as in the House of Commons, the progressive party, when united, outnumbered the section which would have preferred to rely on purely private effort for the improvement of education. But the question still remained unanswered: How could grants of public money be so arranged as at one and the same time to protect the central treasury from extravagant demands, to foster local interest in education, and to preserve the denominational character and specific religious teaching of voluntary schools?

This question compelled the Commissioners to consider in detail the problem of rate aid to denominational schools. One of the witnesses (the Rev. Dr. Temple) advocated the policy of supporting such schools out of the rate. He explained his views on the subject in the following words‡:—

"The objections urged against supporting schools by a rate are the increase of religious animosity and the decrease of religious zeal. Now, of course, any such change as I am advocating might produce some considerable religious heat at first; but we have seen an example of what it really amounts to. In 1846 the Committee of Council proposed the management clauses. A very angry controversy followed; there were public meetings and angry pamphlets, and a good deal of downright acrimony. The heat lasted about five years, and then began to die out. At the present time, thirteen years after, there are still left the traces of the quarrel here and there in the country. . . . I do not anticipate any greater amount of religious discord in consequence of a proposal to rate the country for purposes of education. There would be no doubt just at first some eagerness everywhere to get the majority in the board of school guardians; there would be attempts to sway the regulations in a direction to favour one denomination or another. But this would never be able to do much since the central office would have to be consulted and would certainly be strong enough to prevent all real injustice, and the two parties would soon learn that the advantages of a victory were not worth the labour. . . . But the fact is that the objectors are frightened by the present state of the Church Rate controversy; they forget that church rates are levied on all denominations for the benefit of one, which alters the condition of the controversy entirely. Moreover, while I

\* Report of Duke of Newcastle's Commission, vol. i., p. 298.

† *Ibid.*, vol. vi., p. 299.

‡ *Ibid.*, p. 353-4.



admit the possibility of religious strife at first, I am confident that it would be confined to comparatively few places. In the towns the different denominations have their separate schools and the central office would compel the boards to hold the balance between them tolerably even, nor do I think there would be much temptation to injustice or rivalry. In the great majority of country parishes the Dissenters would be quite content with the right of withdrawal from religious instruction, and would acquiesce in leaving the schools in the hands of the clergy. The strife would only be in cases where the parties were balanced, and yet the population was not enough to justify two schools. Such cases would not be many, and eventually these schools would probably hold a neutral position and the distinctive religious teaching would go to the Sunday schools. The other objection is that there would be a diminution of religious zeal. Now very much of the religious zeal that has been so conspicuous in promoting education must, I fear, fall under Coleridge's condemnation of the man who prefers Christianity to truth, his own sect to Christianity, and himself to his own sect. And this, I believe, would diminish. There would be less opening for that religious zeal which gets up public meetings and fancy sales, writes thousands of begging letters, and contrives innumerable devices for collecting money. But the religious zeal which superintends the efficient working of a school, helps the teachers by sympathy, encouragement, and advice, visits the parents, and urges on them the duty of seeing their children well brought up,—this religious zeal would find as large a field for its activity as ever. I do not think we ought to keep a bad system in order to supply religious zeal with materials to work upon; but the change that I propose would not leave religious zeal without materials; it would only cut off a form of religious zeal which I believe to be very often unhealthy."

On the other hand, Sir James Kay Shuttleworth, who spoke from a long experience as secretary to the Committee of Council from 1839-50, took a less sanguine view of the situation. He had been closely associated with the preparation of the Manchester and Salford Education Bill because he "thought it very important to investigate the bearings of a rate in aid of the existing system of Government administration."\* But the reception of the rate-aid scheme had led him to think there would be "the greatest possible repugnance in the municipalities to assume a burden which would invest them with very little additional power but with a disproportionate additional charge." The result in "my mind," he continued, "was that a rate which did not confide the entire management of schools to the municipality would be rejected by the municipalities of England; that they would not accept a charge of 6d. in the £ upon the property, unless they had the entire regulation of the school. So that, though I entered into the experiment for the sake of thoroughly investigating the whole subject, I never was sanguine as to the result, and I think that the result was conclusive against the early adoption of partial rating."†

The Commissioners of 1861 inclined to Sir James Kay Shuttleworth's opinion. While recognising "the advantages of a rating system, they pointed to the failure of various Bills which proposed such a scheme." They evidently thought that rate-aid to denominational schools involved control by the ratepayers, and they distinctly state their opinion that "the independence of the religious teaching" cannot be secured "where

\* Duke of Newcastle's Commission, vol. vi., p. 318-320.

† *Ibid.*, p. 319 *et seq.*

"the management is mainly committed to the ratepayers or where the teaching is not left with the religious denomination to which the school belongs."<sup>\*</sup>

The result was that the Newcastle Commission proposed (*a*) changes in the conditions of awarding the State grant to schools, and (*b*) a grant from the country rate to be paid for individual scholars upon examination by examiners (being certified masters of at least seven years' standing) appointed by the projected County Boards of Education.<sup>†</sup>

These two proposals were regarded by the Commissioners as necessary parts of one scheme of reform.

The recommendation that the Parliamentary grant should be paid direct to the managers and should depend largely on the record of the individual examination of the scholars "formed the backbone of "Mr. Lowe's Code."<sup>‡</sup> The second paragraph of the Commissioners' proposal, viz., the establishment of county boards and the distribution of the produce of a county rate were never carried into effect. Speaking in the House of Lords on December 2nd, 1867, Earl Russell said that "the late Sir George Cornewall Lewis, who applied himself very seriously to this question, said that the fault in the report of the Commission was that it did not propose to give local control, and he further observed that it was perfectly clear that if local rates were levied for the purposes of education, the persons who paid those rates were entitled to decide in what manner they should be applied."<sup>§</sup> It became known at a later time that the Government had actually considered the possibility of adopting the county rate scheme proposed by the Newcastle Commission, but (as was explained by Mr. Lowe to Sir John Pakington's Committee in 1865-6) "decided that the plan was impracticable, and that it would be impossible to persuade the House of Commons to agree to it."<sup>||</sup>

Many persons predicted that, unless some other source were found for the income of schools besides the Privy Council grants and the local voluntary agencies and school pence, some measure would sooner or later be adopted to restrain the growth of the Parliamentary grant. The Newcastle Commission tried to find such a source. Its suggestions were not taken up. What had been foreseen actually happened, and Mr. Lowe's Revised Code was introduced to restrain the central expenditure on elementary education.

In introducing the Revised Code on February 13th, 1862, Mr. Lowe said: "I can promise that this system shall be either the one thing or the other; if it is not cheap it shall be efficient; if it is not efficient it shall be cheap."<sup>¶</sup> It proved to be cheap. The Parliamentary grant fell from £813,441 in 1861, to £636,810 in 1865. But the effect on the schools was not satisfactory. Public opinion began to demand a change. The Minute of the Vice-President (Mr. Corry) of February 20th, 1867,

<sup>\*</sup> Duke of Newcastle's Commission, vol. i., pp. 301-308, and especially p. 307.

<sup>†</sup> *Ibid.*, p. 328-333.

<sup>‡</sup> Royal Commission on Elementary Education, 1888. Final Report, vol. i/ pp. 15, 16.

<sup>§</sup> Hansard, vol. 190, pp. 481, 482.

<sup>||</sup> Compare Hansard, vol. 191, p. 112. Speech of Duke of Marlborough, March 24, 1868.

<sup>¶</sup> Hansard, vol. 165, p. 229.



encouraged hopes of further reform. New projects of legislation began to appear. And conspicuous among them was the revised "Manchester and Salford Education Scheme," embodying proposals for rate-aid to denominational schools as part of a general reorganisation of elementary education.

6.—MESSRS. BRUCE, FORSTER, AND EGERTON'S EDUCATION OF THE POOR BILL, 1867, THE GOVERNMENT EDUCATION BILL, 1868, AND MESSRS. BRUCE, FORSTER, AND EGERTON'S EDUCATION BILL, 1868.

The first attempt, however, to revive the question of educational rating as a matter of practical politics was made by Sir John Pilkington.\* He moved for a committee of the House of Commons on the subject of elementary education in 1865. The Committee made no report, but the draft report written by Sir John as chairman was published. In that report the following passage dealt with the question of rates:—

"Several of the most important witnesses have accompanied their approval of local agency with a recommendation of a system, more or less modified, of rating. Mr. Lingen thinks there should be the power, though he does not think it would be necessary 'in every case to levy a rate'; Mr. Lowe approved rates, though he doubts whether he can now adopt them; Earl Granville and Lord Russell both contemplate rating as part of an extended system. Mr. Kennedy, the inspector, Canon Robinson, and Mr. Bellairs, the inspector, all concur in these views, and are of opinion that some power to levy a rate should at least be made auxiliary to the extension of popular education. Your Committee cannot refuse their assent to the reasons advanced by these able witnesses, and while they feel on this point, as in recommending local agency, that it is not their province to submit a detailed plan, they are of opinion that an education rate ought to form part of any scheme for extended assistance."

(a) In the session of 1867, Messrs. Bruce (afterwards Lord Aberdare), W. E. Forster, and Algernon Egerton introduced their "Education of the Poor Bill." It was introduced on April 5th, and an important discussion took place on the motion for the second reading on July 10th.† This Bill was the lineal descendant of the old Manchester and Salford Education Bill, and Mr. Algernon Egerton was "the personal representative of the earnest and influential union of the friends of education in Manchester, which brought forward the earlier Bill. Fourteen years had not passed without removing some who had taken an active part in preparing the Bill of 1851. But several still remained at their post, ready to lend their best help to any honest endeavour to solve the educational problem of the nation. These, joined by other earnest friends of education, put the machinery in motion which in 1867 brought forward the Bill of Messrs. Bruce, Forster, and Egerton."‡

The new Bill was a great improvement on its predecessor. It was more ingeniously drawn, and proposed, on almost every point, a well-

\* In 1865-6 Mr. Fraser put forward a scheme for an education rate in poor law unions, but the plan was regarded as unsuitable for large towns, though the poor law machinery might, in default of anything better, suit rural districts. (Compare Mr. Bruce's speech, House of Commons, July 10, 1867; Hansard, vol. 188, p. 1330.)

† Hansard, vol. 188, pp. 1332-1366.

‡ Final Report of Royal Commission on Elementary Education, 1888, pp. 20, 21.



considered and consistent scheme. But it was permissive; and, therefore, it was open to the objection, that in the very districts which were most lacking in educational facilities it would probably fail to operate. The Act was to be adopted by a vote of the majority of the ratepayers (clause 5). On adoption, the Act was to be carried out by a school committee (clause 9). The school committee was to consist of six, nine, or twelve elected members, and to be a body corporate. It was to be elected (a) in the City of London, by the Common Council, either wholly or partly from among their own body; (b) in a borough, by the town council, either wholly or partly out of their own body; and (c) in any other place by the occupiers on the rate-book (clause 10). The Committee could build new schools in case of local need, and was to have the entire control and management of such new schools which might be conducted as free schools (clauses 29 to 32). It might also take into union with itself existing schools at which the school fees did not exceed 9d. per week (clause 17). Every existing school so united was (1) to be open to Her Majesty's Inspectors and the local inspectors of the district; (2) to be conducted in conformity with the Minutes of the Committee of Council; and (3) to have an effective conscience clause (clause 23). But, subject to these and other conditions of somewhat minor importance, the school committee was "not to interfere with the constitution, management, arrangements, discipline, or instruction of any united school" (clause 26). Thus the Bill proposed, on conditions intended to secure educational efficiency and to protect liberty of conscience, rate-aid to denominational schools under private management.

Mr. Bruce stated that he himself "wished to see public education conducted, as far as possible, in denominational schools, but they had to adapt their system to the wants of a population unhappily divided in religious opinions; and, therefore, without destroying the denominational system or unduly disfavoured it, they had to provide the means by which children of different religious opinions should be educated together without any violation of these opinions."\* Mr. Egerton, in seconding the motion, declared that, if the Bill were passed, it would "in all probability be first put into operation in Manchester, inasmuch as a strong feeling prevailed there in favour of the rating principle."† Mr. Henley renewed his old opposition. "The Bill would have an overwhelmingly hostile influence to existing schools in the country."‡ Mr. W. E. Forster argued for the Bill that at least it would make a beginning of reform, that it followed the line of least resistance, and that it protected the interests of existing denominational schools and of religious teaching. He admitted, however, that the existing rating area needed reform.§ Mr. Gladstone strongly urged the importance of introducing a conscience clause into all denominational schools: "that," he said, "was the only chance for maintaining harmony between what he might call the old system and the demands of the new system; a harmony which he thought it exceedingly desirable to attain, because, in

\* Hansard, vol. 188, pp. 1332, 1333.

† *Ibid.*, p. 1350.

‡ *Ibid.*, p. 1342.

§ *Ibid.*, p. 1351-1358.

"his opinion, if the matter came to actual conflict, the new system would prevail."\*

There was no time, however, to proceed with the Bill in that Session, and on July 15th it was withdrawn.

In the autumn of 1867 the education question was raised again—this time in the House of Lords by Earl Russell, who, on December 2nd, moved four resolutions in favour (1) of improvement in elementary education; (2) of the better administration of charitable endowments; (3) of university reform; and (4) of the appointment of a Minister of Education with a seat in the Cabinet.† Lord Russell declared that, in his opinion, rates would be necessary to aid elementary schools, but the tenor of his guarded remarks was to indicate that rate-aid would involve ratepayers' control. He urged the necessity of a conscience clause in denominational schools and avowed a preference for the form of religious teaching approved by the British and Foreign School Society. The Duke of Marlborough, replying on behalf of the Government, deprecated any great change in the educational system, announced that Ministers had the question of public elementary education under their consideration, and declared that he would not "deem it his duty to do anything which would disturb the denominational system which he believed to be the keystone of the education of the country."‡

Lord Russell's resolutions were negatived.

(b) On March 24th, 1868, the Duke of Marlborough, on behalf of the Government, introduced an Education Bill into the House of Lords. He stated that the Government had decided not to adopt the principle of rating. The chief ground of their decision was that the rating system would, in their judgment, destroy voluntary contributions, and that denominational managers would gradually abandon "the system of voluntary effort and self-management under which they had hitherto existed, and would be driven, by a process of starvation, to come into union," i.e., with the rate-aided system.§ In other words, the Ministry took the view so often urged by Mr. Henley, in preference to that of Sir John Pakington, and shrank from rate-aid because they considered that its introduction would eventually prove destructive of private management of denominational schools.

The Government Bill proposed, among other matters, to embody the Revised Code in a Statute, to revive the building grants, to institute an educational census, and to create a new Secretary of State "with the whole range of educational matters under his consideration and control." In the debate on the second reading (April 27th, 1868), the Archbishop of Canterbury expressed his pleasure "that rating clauses were not included among its provisions, inasmuch as he was of opinion that their introduction would be premature, until after the proposed general census was taken, and the educational wants of the country thus accurately ascertained."|| The Earl of Harrowby spoke strongly against "the rating system of education," which he thought "unwise and im-

\* Hansard, vol. 188, p. 1365.

† *Ibid.*, vol. 190, pp. 478-506.

§ *Ibid.*, vol. 191, p. 114.

‡ *Ibid.*, p. 505.

|| *Ibid.*, p. 1310.

"litic at the present conjuncture when they were about to abolish rating for the support of the church. If they introduced the system of rating in regard to education they would be making the minority submit to the will of the majority in a matter which moved men's consciences quite as deeply as church rates did."\*

The Bill, however, though well received in some quarters,† failed to excite enthusiasm, partly because it proposed to stereotype the Code.‡ It was withdrawn on May 18th, 1861.

(c) In the meantime, Messrs. Bruce, W. E. Forster, and Egerton had again introduced an Elementary Education Bill into the House of Commons. The measure was read a first time on March 17th, 1868. In introducing it, Mr. Bruce said that "it contained all main principles and provisions of the Bill of 1867, with the addition of machinery for its compulsory enforcement when the existence of educational destitution had, after formal inquiry, been proved."§ The new clauses for the compulsory application of the Act were numbered 14 to 18. One-tenth of the electors in a school district might apply for a compulsory order (clause 15). The Committee of Council might then appoint a commissioner to hold an inquiry (clause 16), but such an inquiry might also be directed by the Committee of Council on their own authority (clause 16.)|| The local school committee was, as before proposed, to be elected (in boroughs) by the town council either wholly or partly out of their own body "so that persons might be placed on it who, not being members of the council, were known to be specially qualified for the work."

It was pointed out that, in thus trying to meet the objections which had been raised to the permissive character of the earlier Bill, Mr. Bruce and his coadjutors laid themselves open to criticism from another point of view. The Bill proposed what in effect would have come to compulsory rate-aid to denominational schools under private arrangement. At the same time they placed it in the power of the Central Authority to enforce the application of the Act in districts where there was educational destitution. It was held by some that such a scheme might have led to conflicts between the local and central bodies and have precipitated in some localities a movement against the payment of the education rate.

The Bill was withdrawn by Mr. Bruce on June 24th, 1868.¶

These repeated attempts, however, to raise the question in Parliament showed how rapidly the feeling was rising in the country that something must be done to strengthen and extend the system of elementary education. The course which public opinion was taking is well shown by a long "Memorandum on the influence of the Revised Code on Popular Education," written in 1868 by Sir James Kay Shuttleworth.\*\* Sir James, who in 1860 had declared, before the Duke of Newcastle's Commission, his opinion that rate-aid to denominational schools under pri-

\* Hansard, vol. 191, p. 1313.

† *Ibid.*, vol. 192, p. 406. ‡ *Ibid.*, vol. 191, p. 132. (Earl Granville.)

§ *Ibid.*, vol. 190, p. 1817.

|| And compare Mr. Bruce's explanation, Hansard, vol. 190, p. 1818.

¶ Hansard, vol. 192, p. 1983.

\*\* Reprinted in his book "Social Problems," pp. 192-294.



vate management would be rejected by the municipalities,\* had, in the meantime, so far modified his views as to write in this memorandum as follows:—"Facilities to raise a school rate in aid of the existing resources of schools, may have to be granted, but these must be so ordered as not to disturb the connexion of schools with the religious communions, nor the authority of the present committees of management nor the religious constitution of the schools, but also so as to render their income less precarious, their efficiency greater, and the means of providing them more abundant."†

The time was now nearly ripe, and public opinion sufficiently matured, for the introduction of a larger measure for the improvement of public elementary education. And the rate-aid scheme accordingly appeared in the Bill introduced in 1870 by Mr. W. E. Forster and Mr. Bruce on behalf of Mr. Gladstone's administration.

#### 7.—THE GOVERNMENT BILL OF 1870.

This Bill bore a strong resemblance to the Education Bill, introduced by Messrs. Bruce, Forster, and Egerton in 1868. The names of the first two were on the back of the new measure.

This Bill became the Act which is the foundation of the present system of Elementary Education in England and Wales. As passed, it comprised 100 clauses and 5 schedules. It is in two main divisions, the first relating to local provision for schools, the second to the conditions of the annual Parliamentary grant. It made obligatory the efficient and suitable provision of Elementary Education. It gave the Education Department the duty of determining whether or no there was in any school district, a deficiency of public school accommodation. It provided for the formation of school boards in every school district requiring further suitable accommodation. The School Board was established as a corporate body, having perpetual succession and a common seal with power to acquire and hold land for the purposes of the Act. It directed that, as the source of income of a school board, a school fund should be formed, to include, along with school fees, grants and money raised by rate. Any sum needed to meet a deficiency of the school fund was required to be paid by the local authority out of the local rate. It introduced from the Revised Code a limit to the amount of the annual grant, which provided that the annual grant should not exceed the amount locally contributed in the form of subscriptions, school fees, and income derived from sources other than the Parliamentary grant.‡ It gave school boards the power of making byelaws, compelling the attendance at school of children between 5 and 13, subject to certain conditions.

The Bill, as Mr. Forster explained in his speech on the first reading (February 17th, 1870) made the town council the electing body of school boards in boroughs, giving a similar power to the school vestry in country districts. It empowered the school boards so elected either to pro-

\* Duke of Newcastle's Commission, vol. vi., p. 319.

† "Social Problems," pp. 276-7.

‡ Repealed, so far as Day Schools are concerned, by the Voluntary Schools Act, 1897.

vide schools themselves, or to assist existing schools. But Mr. Forster explained that "on further examination of the question," his colleagues and he had "not thought it right to insist on the school board assisting 'the present schools.'" The scheme, therefore, allowed local option in the matter. But if a school board decided to avail itself of the option of assisting denominational schools, it was to be required to assist all denominational schools on equal terms. It was not to pick out the school of a particular denomination and accord to it specially favourable terms. Any school board which desired to do so might, under clause 22, "in their discretion grant pecuniary assistance, of such 'amount and for such purposes as they think fit, to such public elementary schools in their district . . . as are willing to receive it, *provided that such assistance is granted on equal terms to all such schools*, 'upon conditions to be approved by the Education Department.'" Thus the school board would have been obliged to aid *all* efficient denominational schools in its district or *none*.

But, on the motion for going into committee on the Bill (June 16th), Mr. Gladstone announced an important change in this part of the Bill. He admitted that "throughout the country, in many of the greatest 'centres of population, thought and activity, the utmost apprehension 'prevailed with respect to the extent of the sphere assigned to the free 'judgment of the local boards.'"\* It was idle, he said, to propose that the denominational schools should be required by the local boards to abandon their denominational character. In other words, if rate-aid was to be given to denominational schools at all, their private management must be maintained. But what guarantee was there that such rate-aid would be sufficiently permanent and continuous? "The fluctuating 'and unstable character which must attach to any assistance given by 'a local board out of rates to voluntary schools," he continued, "has 'come prominently under our notice, and appears to me to be a consideration of the utmost importance in any attempt to bring about a 'practical settlement of the question.'"† Accordingly the Government had decided "to sever altogether the tie between the local board and the 'voluntary schools.'"‡ In lieu of the suggested rate-aid they proposed an increased grant from the Treasury."

This was a fundamental change in the policy of the Bill. The privately-managed denominational schools were left outside the circle of rate-aid. The character of religious education in the board schools was determined by the introduction of the Cowper-Temple Clause (*i.e.*, Section 14 of the Act), that "no religious catechism or religious formulary which is distinctive of any particular denomination" shall be taught in a school provided by a school board.

The special difficulty presented by the case of London subsequently led to the substitution of an "ad hoc" school board, directly elected by the ratepayers, for the municipally appointed board originally proposed by the Bill. Thus the Act as passed was wholly different in character from the earlier Bills on which it had largely been modelled.

\* Hansard, vol. 202, p. 270.

† *Ibid.*, p. 278.

‡ *Ibid.*, p. 278.

## V.—MINUTES OF THE COMMITTEE OF COUNCIL ON EDUCATION.

The various Minutes of the Committee of Council on Education, in so far as they were still in force, were formed into a Code in 1860.

In an introductory memorandum to the consolidation of the Minutes and Regulations in force April 14th, 1858, it is pointed out that "the chronological order, and the full terms, of the Minutes are so important to a complete understanding of the operations of the Committee of Council, that no digest can completely supersede it."

Space prevents us from giving in this abstract the full terms of all the Minutes. We have, indeed, been obliged to omit any mention of the majority of them, such, for example, as those, very important at the time, which prescribed the forms of agreement which had to be adopted by the different religious denominations. Our aim has been to reproduce in chronological order those portions of the Minutes which seem best to illustrate the development of the work of the Committee of Council. Our extracts show how one grant gradually succeeded another, and how grants, which were small in their beginnings, afterwards attained a principal importance, while others which were originally the chief became of little moment or ceased altogether. The statistical tables which follow show the monetary significance of each grant.

### I.

By the Treasury Minute of the 30th August, 1833, the following were declared to be the conditions of their Lordships' grants:—

1. That no portion of this sum be applied to any purpose whatever, except for the erection of new school-houses, and that in the definition of a school-house the residence for masters or attendants be not included.
2. That no application be entertained unless a sum be raised by private contribution equal, at the least, to one-half of the total estimated expenditure.
3. That the amount of private subscription be received, expended, and accounted for, before any issue of public money for such school be directed.
4. That no application be complied with, unless upon the consideration of such a report, either from the National School Society, or the British and Foreign School Society, as shall satisfy the Board that the case is one deserving of attention, and that there is a reasonable expectation that the school may be permanently supported.



5. That the applicants whose cases are favourably entertained be required to bind themselves to submit to any audit of their accounts which this Board may direct, as well as to make such periodical reports respecting the state of their schools and the number of scholars educated as may be called for.
6. That in considering the applications made to the Board a preference be given to such applications as come from large cities and towns, in which the necessity of assisting in the erection of schools is most pressing, and that due inquiries should also be made before any such application be acceded to, whether there may not be charitable funds, or public and private endowments, that might render any further grants inexpedient or unnecessary.

## II.

(PLAN OF COMBINED EDUCATION: LORD MELBOURNE'S GOVERNMENT.)

Extract from the Minutes of the Committee of Council appointed to superintend the application of any sums voted by Parliament for the purpose of promoting public education:—

APRIL 13TH, 1839.

*Read,* The following scheme for the future guidance of the Committee: viz.

- |  |   |
|--|---|
| Normal School.                         | "To found a school, in which candidates for the office of teacher in schools for the poorer classes, may acquire the knowledge necessary to the exercise of their future profession, and may be practised in the most approved methods of religious and moral training and instruction.   |
| Model School.                          | "This school to include a Model School, in which children of all ages, from three to fourteen, may be taught and trained, in sufficient numbers to form an Infant School, as well as schools for children above seven.  |
| Religious Instruction in Model School. | "Religious instruction to be considered as general and special.   |
| General.                               | "Religion to be combined with the whole matter of instruction, and to regulate the entire system of discipline.   |
| Special.                               | "Periods to be set apart for such peculiar doctrinal instruction as may be required for the religious training of the children.   |
| Chaplain.                              | "To appoint a chaplain to conduct the religious instruction of children whose parents or guardians belong to the Established Church.  |
| Dissenters.                            | "The parent or natural guardian of any other child to be permitted to secure the attendance of the licensed minister of his own persuasion, at the period appointed for special religious instruction, in order to give such instruction apart.   |
| Licensed Minister.                     | "To appoint a licensed minister to give such special religious instruction wherever the number of children in attendance on the Model School belonging to any religious body dissenting from the Established Church, is such as to appear to this Committee to require such special provision.  |
| Scriptures read daily in School.       | "A portion of every day to be devoted to the reading of the Scriptures in the School, under the general direction of the Committee, and superintendence of the rector. Roman Catholics, if their parents or guardians require it, to read their own version of the Scriptures, either at the time fixed for reading the Scriptures, or at the hours of special instruction. |
| Roman Catholics.                       |   |
| Simultaneous Method.                   | "To arrange the classes in separate rooms or sections of the same apartment, divided by partitions, so as to enable the simultaneous method to be applied to 40 or 50 children of similar proficiency.  |
| Classes.                               |   |

"To adopt means to assemble a greater number of children for simultaneous instruction on subjects not so technical as to require a division into classes of 50. Gallery.

"To include instruction in industry as a special department of the moral training of the children. Instruction in Industry.

"To give such a character to the matter of instruction in the school as to keep it in close relation with the condition of workmen and servants. Special Character of Secular Instruction.

"Besides the physical training of the children in various employments, to introduce such exercises during the hours of recreation as will develop their strength and activity. Physical Training.

"To render the moral training of the children at all times an object of special solicitude. Moral Training.

### "NORMAL SCHOOL.

"To provide apartments for the residence of the candidate teachers. Candidate Teachers to reside.

"To construct the class-rooms so as to afford the candidate teachers an opportunity of attending each class in the Model School without distracting the attention of the children or of the teacher. Class Rooms

"To provide means for the instruction of the candidate teachers in the theory of their art, and for furnishing them with whatever knowledge is necessary for success in it. Means of Instruction and Training

"To appoint a rector to give lectures upon the method and matter of instruction, and on the whole art of training children of the poor. To regulate the reading and exercises of the candidate teachers, and to examine them. To determine the order in which they may be admitted to the practice of their art in the school, and at length intrusted with the conjoint management of classes, and to superintend their ultimate examination, subject to the rules of this Committee. Rector; his duties.

"The religious instruction of the candidate teachers to form an essential and prominent element of their studies, and no certificate to be granted unless the authorised religious teacher have previously attested his confidence in the character, religious knowledge, and zeal of the candidate whose religious instruction he has superintended. Religious Instruction of candidate Teachers.

"The religious instruction of all candidate teachers connected with the Established Church to be committed to the Chaplain, and the special religious instruction to be committed (in any case in which a wish to that effect is expressed) to the licensed minister of the religious persuasion of the candidate teacher, who is to attend the school at stated periods, to assist and examine the candidate teachers in their reading on religious subjects, and to afford them spiritual advice. Chaplain to instruct Teachers belonging to Established Church.

"The candidate teachers in all other respects to conform to such regulations as respects the entire internal economy of the household as may be issued by the rector, with the approval of this Committee. Dissenters' Licensed Minister.

"To provide accommodation in the Model School for at least 450 children, who should lodge in the household, viz., 120 infants, 200 boys and girls receiving ordinary instruction, and 50 boys and 50 girls receiving superior instruction, and 30 children probably absent from sickness or other causes. Internal Discipline of Normal School.

"To establish a day school of 150 or 200 children of all ages and both sexes, in which the candidate teachers may realise the application of the best methods of instruction, under the limitations and obstructions which must arise in a small village or town day school. Number of Children in Model School. Boarders. Day School.



Order in Council, approving a Report from the Committee of Council on Education, (1) postponing any steps towards the establishment of a Normal School under the direction of the State, and (2) recommending inspection of all schools, normal and other, receiving a share of the Parliamentary grant.

#### ORDER IN COUNCIL,

*At the Court at Buckingham Palace, the 3rd of June, 1839.*

Present,

THE QUEEN'S MOST EXCELLENT MAJESTY IN COUNCIL.

Whereas there was this day read at the Board a Report from the Committee of Council appointed to superintend the application of any sums voted by Parliament for the purpose of promoting Public Education; which Report, dated the 1st of June, was in the words following; viz. :—

"Your Majesty having been pleased, by your Order in Council of the 10th April, 1839, to appoint us a Committee of Council to superintend the application of any sums voted by Parliament for the purpose of promoting Public Education; we, the Lords of the said Committee, have this day met, and agreed humbly to present to your Majesty the following Report :—

"The Lords of the Committee recommend that the sum of £10,000, granted by Parliament in 1835 towards the erection of Normal or Model Schools, be given in equal proportions to the National Society and the British and Foreign School Society. That the remainder of the subsequent grants of the years 1837 and 1838, yet unappropriated, and any grant that may be voted in the present year, be chiefly applied in aid of subscriptions for building, and, in particular cases, for the support of schools connected with those societies; but that the rule hitherto adopted of making a grant to those places where the largest proportion is subscribed be not invariably adhered to, should application be made from very poor and populous districts, where subscriptions to a sufficient amount cannot be obtained.

"The Committee do not feel themselves precluded from making grants in particular cases which shall appear to them to call for the aid of Government, although the applications may not come from either of the two mentioned societies.

"The Committee are of opinion that the most useful application or any sums voted by Parliament would consist in the employment of those moneys in the establishment of a Normal School, under the direction of the State, and not placed under the management of a voluntary society. The Committee, however, experience so much difficulty in reconciling conflicting views respecting the provisions which they are desirous to make in furtherance of your Majesty's wish that the children and teachers instructed in this school should be duly trained in the principles of the Christian religion, while the rights of conscience should be respected, that it is not in the power of the Committee to mature a plan for the accomplishment of this design without further consideration; and they therefore postpone taking any steps for this purpose until greater concurrence of opinion is found to prevail.

"The Committee recommend that no further grant be made, now or hereafter for the establishment or support of Normal Schools, or of any other schools, unless the right of inspection be retained, in order to secure a conformity to the regulations and discipline established in the several schools, with such improvements as may from time to time be suggested by the Committee.

"A part of any grant voted in the present year may be usefully applied to the purposes of inspection, and to the means of acquiring a complete knowledge of the present state of Education in England and Wales."

Her Majesty, having taken the said Report into consideration, was pleased, by and with the advice of Her Privy Council, to approve thereof.

(Signed) C. C. GREVILLE.



EXTRACTS FROM THE MINUTES OF THE COMMITTEE OF COUNCIL ON  
EDUCATION.

*24th September, 1839.*—Before any application for aid shall be entertained, the Committee will require to be satisfied, by reference either to the Inspectors, or to the National or British and Foreign School Society, or, if the school be in Scotland, to some competent authority there:—

1. That the case is deserving of assistance.
2. That there are no charitable or other funds or endowments which might supersede the necessity of a grant.
3. That the site of the school-house has been obtained, with a good legal tenure; and that, by conveyance to trustees, it has been duly secured for the education of the children of the poor.
4. That it is reasonable to expect that the school will be efficiently and permanently supported.
5. Not less than six square feet shall be provided for each child.
6. That for every 10s. to be granted by the Committee, the means of educating one child (at least) shall be provided.

*3rd December, 1839.*—If the school is not in connection with the National Society, or British and Foreign Society, their Lordships must be informed—

1. What are the objections which the applicants make to connecting the intended school with either of these societies.
2. To whom the superintendence of religious instruction will be confided in their school, and whether such religious instruction will be obligatory on all the children in the school, or whether the parent or natural guardian of any child may withdraw it from such religious instruction, or from any portion of it, without thereby forfeiting the advantages of the general education in the school.
3. Whether the Bible or Testament will be required to be read daily in the school by the children, and whether any or what catechisms will be taught. . . .

*15th July, 1840.*—Before any person is recommended to the Queen in Council to be appointed an Inspector of Schools in connection with the Church of England, the Archbishops of Canterbury and York be consulted by the Committee of Privy Council, each with regard to his own province, and that they be at liberty to suggest any person or persons for the office of Inspector, and that no person be appointed without their concurrence.

*22nd November, 1843.*—

1. To make grants towards the providing or enlarging of houses of schoolmasters and schoolmistresses where schoolrooms have been erected (either with aid from the Parliamentary Grant or otherwise), but no house built, or no sufficient dwelling provided, for the master or mistress.
2. To make grants towards enabling the trustees or managers of any school to provide the schoolroom suitably with furniture and apparatus which may be necessary, in the first instance, to enable

them to commence teaching in the school, and that not only in the case of new schools, but when it is proposed to establish a Day School where a Sunday School only has previously been kept. [Two-thirds of the expense of providing desks and apparatus (not books) was borne by the Committee of Council.]

3. To confine their grants to Normal Schools to a proportion of the original expense of the building, and not, in any case, to make an annual grant towards the maintenance of such school. [The sum to be granted towards buildings was afterwards fixed at £50 for every pupil accommodated.]
4. To recommend Her Majesty to increase the number of Inspectors (hitherto there had been two Inspectors only—one for schools connected with the National Society and the Church of England, and one for the schools connected with the British and Foreign School Society).

30th November, 1843.—No Inspector shall be appointed to inspect schools connected with the British and Foreign School Society without the full concurrence of the Committee of that Society.

16th January, 1844.—The grant to Normal Schools shall be a sum equal to £50 for every pupil which the proposed building is to accommodate. The usual rate of aid will also be made towards the erection of the model schools.

25th August, 1846.—That the Lord President cause regulations to be framed defining the qualifications of the schoolmaster; the condition of instruction in the school, and the local contributions to be required as conditions on which annual grants of money may be made towards the stipends of apprentices in elementary schools; and further, cause indentures of apprenticeship to be prepared, declaring the duties of the apprentice and the nature of the instruction he is to receive; the periods of examination by the inspectors of schools, and the circumstances under which the indenture may be dissolved, in order that stipends increasing in each year of the apprenticeship may be granted in aid of local contribution.

That as the masters having charge of the instruction and training of school apprentices will be selected for their character and skill, and as the education of the apprentices will increase the labour and responsibilities of such masters, it is expedient that the successful performance of these duties be rewarded by annual grants in aid of their stipends, according to the number of apprentices trained by each master.

That it is expedient to make provision in certain cases, by a retiring pension, for schoolmasters and mistresses who, after a certain length of service, may appear entitled to such pension.

That it is expedient for the further encouragement of deserving schoolmasters that small gratuities be annually distributed, under the authority of the Lord President, to schoolmasters whose zeal and success in teaching may, on the report of the Inspectors, appear to entitle them to such encouragement.

21st December, 1846.—Regulations respecting the education of Pupil Teachers and Stipendiary Monitors. Pupil Teachers to be at least 13 years of age, to have good health and character, to pass an examination on entry and at the end of each year of their apprenticeship. Stipendiary monitors may be retained until they are seventeen years of age, without



apprenticeship, on passing an examination at the end of each year of service. The following stipends to be paid by the Education Department, irrespectively of any sum that may be received from the school or from any other source:—

—		For a Pupil Teacher.	For a Stipendiary Monitor.
		£ s.	£ s.
At the end of the 1st year	- -	10 0	5 0
„ 2nd „	- -	12 10	7 10
„ 3rd „	- -	15 0	10 0
„ 4th „	- -	17 10	12 10
„ 5th „	- -	20 0	—

The master or mistress by whom they have been instructed shall receive each year the sum of £5 for one, £9 for two, £12 for three pupil teachers, and £3 per annum more for every additional apprentice, and £2 10s. for one stipendiary monitor, £4 for two, £6 for three, and £1 10s. for every additional stipendiary monitor. Also, an additional gratuity for training the pupil teacher in the culture of a garden, mechanical arts (for boys), or in cutting out clothes, cooking, baking or washing (for girls). In return for the gratuity the pupil teacher and stipendiary monitors are to receive at least 1½ hours' instruction during five days in the week.

On completion of their apprenticeship an exhibition of £20 or £25 per annum could be obtained to one of the Normal Schools, and the pupil teacher be denominated a "Queen's Scholar."

Grants to Normal Schools for every student trained therein were promised of £20 at the end of the first year, of £25 at the end of the second, and of £30 at the end of the third year's instruction, if he obtained in each of the three years' residence a certificate of merit from the Committee of Council.

["Thus Government may assist a meritorious pupil teacher with £190 in educating himself for the office of schoolmaster, viz.:—£75 in the course of his apprenticeship, £20 or £25 as an Exhibition at a Training School, and £75 paid to the Training School on his account, besides £15 or £20 paid to the master of the Elementary School."]

Those masters trained at Normal Schools who have obtained the proper certificate of merit in each year and been appointed to schools inspected by the Department are to be paid £15 or £20 if trained for one year, £20 or £25 if trained for two years, and £25 or £30 if trained for three years, providing that the managers provide the master with a house rent free, and a further salary, equal at least to twice the amount of this grant. Two-thirds of these sums are to be awarded to mistresses.

Pensions were to be given to teachers who had been teaching at least fifteen years, and were not to exceed two-thirds of the average salary received by the applicant during the period that the school has been under inspection.

Grants in aid of Day Schools of Industry:—

A field-garden for the instruction of the scholars. An annual grant not exceeding half the rent, grant towards first purchase of tools, a gratuity to master.

Workshops in which handicrafts could be taught. Grants towards the



erection or hiring, grants towards first purchase of tools, gratuity to master.

School-kitchens, washhouses.—Grant to erection, gratuity to mistress.

It was also resolved to establish normal and model schools for the training of masters of schools for pauper and for criminal children.

*28th June, 1847.*—By means of the Minute of the 3rd December, 1839, the schools recognised by the Education Committee of the Wesleyan Connexion will be admitted to the public grants on the conditions observed in common both by schools connected with the National and with the British and Foreign School Societies. . . . that the daily reading of a portion of the Scriptures shall form part of the instruction in the school.

Their Lordships are anxious to appoint as Inspectors of Wesleyan Schools, such persons only as may obtain the confidence and support of the Education Committee of the Wesleyan Conference, and they will not recommend any person to Her Majesty for such appointment, without previously consulting the Wesleyan Education Committee.

*July, 1847.*—Their Lordships will allow the school-pence to be taken into account, to the extent of one-half the salary which must be paid the teacher as a condition of their Lordships' grant. Thus, as a condition of the payment by the Committee of Council of an augmentation of salary, amounting to £15, the managers must provide the teacher with a salary of £30, and their Lordships will require that at least £15 of this salary shall be derived from subscriptions, donations, or collections, either local or from a general subscription fund.

Their Lordships are of opinion that it is not expedient to take into account any local or general permanent endowment.

*18th December, 1847.*—That it is expedient to encourage by grants the introduction into elementary schools of the most approved lesson-books and maps for the use of the scholars, and of text-books for the teachers and pupil teachers. That grants be made at a rate not exceeding 2s. (or 2s. 6d. if pupil teachers are apprenticed) per scholar in average attendance, on condition that two-thirds of the value be subscribed by the managers.

That these grants be renewed in three years, on condition that four-fifths be subscribed.

That all books and maps be selected from a list prepared by the Committee of Council. This list contains the names of books, maps, and diagrams off which the publishers allow a discount which averages nearly 40 per cent.

*18th December, 1847.*—That the Roman Catholic Poor School Committee be the ordinary channel of such general inquiries as may be desirable as to any school applying for aid as a Roman Catholic School. That no inspectors be appointed without the Committee's concurrence. That teachers must not be in holy orders, except in training schools and model schools connected therewith.

*25th July, 1850.*—The exhibitions in training colleges awarded to females will be at the rate of two-thirds of those awarded to males, viz., £13 6s. 8d. and £16 13s. 4d., instead of £20 and £25, to correspond with the different expense of boarding and training schools, for males and females respectively.

*6th August, 1851.*—Grants made to certificated teachers in elementary

schools under inspection be extended to resident assistant (certificated) teachers in training schools.

6th August, 1851.—That the pensions to be awarded to teachers, pursuant to the Minute of 21st December, 1846, be as follows :—

20 Pensions of £30 each	-	-	-	£	600
100 „ £25 „	-	-	-	2,500	
150 „ £20 „	-	-	-	3,000	
Donations or Special Gratuities	-	-	-	400	
				<u>£6,500</u>	

10th December, 1851.—Grants for books and maps at the rate of ten shillings per student be allowed to training schools, provided the applicants contribute twenty shillings.

10th December, 1851.—A memorial was read for application for the Jewish Schools to participate in the Parliamentary grant for education.

The Scriptures of the Old Testament to be read daily in the schools. No objection to inspection by Inspectors appointed by Committee of Council.

10th December, 1851.—That pupil teachers be not admissible to be examined for certificates or to receive the augmentation grant until they have been one year in a training college or served for three years as principal or assistant teacher in inspected schools. After 1852 a candidate for examination for a certificate other than a pupil teacher or a student in a training college must be 22 years of age and his school favourably reported on.

23rd July, 1852.—The Lords of the Committee of Council on Education will recognise pupil teachers who have completed their apprenticeship as assistants in schools liable to inspection, under the following conditions, viz. :

1. That in each year of their apprenticeship they shall have acquitted themselves creditably upon examination before Her Majesty's Inspector, and shall have produced unqualified testimonials from the managers and teachers of their schools.
2. That the master or mistress of the school in which the assistant is employed hold a certificate of merit.
3. That the school is well furnished and well supplied with books and apparatus.
4. That every such assistant shall be taken to be equivalent to two apprenticed pupil teachers in reckoning the number of such apprentices to be maintained at the public expense in any school.

That every assistant produce the same annual certificates as are required of apprentices from the managers and principal teacher of the school, and be favourably reported on by Her Majesty's Inspector as to attainments and practical skill.

When the foregoing conditions are fulfilled, their Lordships will allow an annual stipend of £25 in the case of a male, and of £20 in the case of a female assistant teacher.

Assistant teachers of three years' standing and upwards may be examined for certificates of merit.

The same gratuity to the principal teacher as if the assistant had been his apprentice, may be paid if the assistant show sufficient evidence of proficiency in certain subjects from text-books approved by Her Majesty's Inspector.

[The above Minute was cancelled in regard to all pupil teachers apprenticed after the 31st December, 1859.]

*2nd April, 1853.*—Improved grants for the support of schools in the agricultural districts and in incorporated towns (not containing more than 5,000 inhabitants) in England and Wales. Towards the expenses of the preceding year.

That any school now admissible, or which shall hereafter be admitted, to grant, may receive a grant towards the expenses of the preceding year, at the rate per scholar set forth in the following table:—

Number of Scholars.	Boys' Schools.	Girls' Schools.
	<i>s. d.</i>	<i>s. d.</i>
Under 50 - - - - -	6 0	5 0
Above 50 but under 100 - - - - -	5 0	4 0
Above 100 - - - - -	4 0	3 0

Conditions:—

*Income* from endowments, subscriptions, and school-pence (for maintenance), shall amount to 14*s.* per scholar in boys' schools, or 12*s.* in girls' schools.

*Attendance.*—To be reckoned for every scholar who has attended four days per week during 48 weeks, or 192 days in the year. The morning and afternoon school constitute respectively half a day's attendance.

*Fees.*—To be from 1*d.* to 4*d.* per week.

*Teachers.*—Teachers to be certificated (or for the present, registered), and seven-tenths of income, including the grant, to be applied to salary of the teacher and assistant teacher. [This condition of seven-tenths of income was abolished by Minute of 17th July, 1857.] If there are more than 120 children, there shall be a pupil teacher (or equivalent) for every 40 scholars.

*Registers* of attendance and Forms of Account to be kept.

*Examination* to be passed by three-fourths of the scholars, viz., three-fourths of those between 7 and 9, 9 and 11, and 11 and 13 respectively.

Grant may be refused until a school has been placed in more suitable premises, or better supplied with furniture, apparatus, and books. The income of 14*s.* or 12*s.* per child is only required in respect of those scholars for whom the capitation grant is claimable.

[26th January, 1856.—The above Minute of the 2nd April, 1853, was extended to all parts (urban as well as rural) of England and Wales.]



2nd April, 1853.—Minute as to grant to promote Voluntary Assessment towards the expenses of School Building in Rural Districts.

Their Lordships having had under their consideration the difficulty of raising funds for the building of schools, and the importance of promoting an equitable assessment of the owners and occupiers of property in rural parishes for this purpose,

*Resolved*, That whenever the owners and occupiers of property in any parish, not having sufficient accommodation in schools under inspection, and not forming part of an incorporated town, nor containing more than 5,000 inhabitants, shall raise a sum equal to one-half of the estimated outlay for the erection and fitting up of suitable premises, this Committee, on being satisfied of the urgency of the case, will grant one-half of the same outlay, provided that no such grant shall exceed the rate of 6s. for every square foot of area in the school and class-rooms, if the plans include a teacher's residence, or 4s. if they do not include such a residence. Provided also, that the site, plans, estimates, specifications, and trust deed be satisfactory to the Committee.

The object of the above Minute is to encourage local subscriptions. If the local contributions fall short of one half of the estimated cost, the difference which is not covered by them and by the public grant taken together may be made up from such other sources as are available, *e.g.*, from subscriptions not local or from grants from Educational Societies. The Minute is available to the provision of dwelling-houses for teachers and otherwise to the extension and improvement of old premises, as well as to the erection of new.

[14th July, 1855.—The above Minute of the 2nd April, 1853, was extended to all parts (urban as well as rural) of Great Britain.]

[4th May, 1859.—The grant to schools was limited to 4s. per square foot, (so long as this rate does not give more than 40s. per child to be accommodated), and 100l. for each teacher's residence.]

20th August, 1853.—Supplementary Minute relating to Queen's Scholars, apprentices, and certificated teachers.

To remove the limitation at present imposed on the admission of Queen's Scholars, and to allow a further number of Queen's Scholarships.

To grant augmentation of salary to lecturers in training colleges.

To make drawing a part of the examination of students.

To allow a Queen's Scholarship to assistants of three years' standing.

To institute a class of registered as distinguished from certificated teachers. Examination to be passed. Candidates to be over 35 years of age.

29th April, 1854.—Mixed schools in rural parishes containing fewer than 600 inhabitants may be under mistresses.\* [This limitation of population was abolished by Minute of 26th July, 1858.]

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\* Their Lordships, by letter to Her Majesty's Inspectors dated 20th August, 1853, had declined to make capitation grants to a mixed school under a mistress only, if it was the only school in a village, such a school not being fit for boys over 8 or 9 years of age.

Half-time attendance allowed.

29th April, 1854.—A separate and complete course of training for females intended to take charge of infant schools shall be provided in colleges. Grants to the college of 15*l.* for a first class, and 10*l.* for a second class examination shall be paid after not less than one year's training.

28th June, 1854.—A new table of grants to training colleges according to the examinations passed by students in residence therein :—

At the end of Year's Residence.	For Students in each class of merit.	Grant.
First . . . . .	1	20
	2	16
	3	13
Second . . . . .	1	24
	2	20
	3	16
Third . . . . .	1	24
	2	20
	3	16

1st March, 1855.—To award annual payments of from 5*l.* to 10*l.* to teachers in night schools, not otherwise remunerated out of the grant for education, on the following conditions :—

- a. The school fees must equal or exceed the Government grant.
- b. The night school must be in connection with a day school in receipt of annual grant.
- c. Sixty meetings at least must be held.
- d. The teacher must be between 20 and 40 years of age. One year's teaching qualifies him for passing the Queen's scholarship examination, and three years (he being over 30 years of age) for the certificate examination.
- e. H.M. Inspector will report annually on the efficiency.

25th February, 1856.—Order in Council.

Appointment of Vice-President of the Council.

Education Department to include the Education Establishment of the Privy Council Office and the Science and Art Department transferred from the Board of Trade.

14th July, 1855.—

1. Payment for all Queen's scholars to be uniform, viz., 23*l.* for men, and 17*l.* for women.
2. That in consideration of this payment, Normal Colleges, admitting any Queen's scholar, be understood to agree thereby to provide tuition, board, lodging, washing, and medical attendance for such Queen's scholar, without any further charge.

3. The Queen's scholars of the first class be allowed the following personal payments in aid of their travelling and private expenses, and of the purchase of books:—

		First Year.			Second Year.
Men	-	4l.	-	-	6l.
Women	-	3l.	-	-	4l.

31st December, 1857.—Aid to Reformatory Schools withdrawn from Education Grant. Aid to Certified Industrial and Ragged Schools granted.

20th January, 1858.—Area of Rooms designed for Scientific and Artistic Instruction may be reckoned in awarding grants towards school buildings.

26th July, 1858.—Allowed candidates of 16 years of age to become pupil-teachers of the fourth year standing, provided they passed the examination for the end of the third year. Additional facilities were made for the employment of certificated teachers in the schools of small rural parishes.

Where scholars attend a properly organised night school for fifty nights per annum, their number may be added to the number of day scholars for whom the school may receive capitation grants.

4th May, 1859.—To make no grants whatever for *repairing* or *altering* the buildings, fixtures, or furniture of schools erected with the aid of grants at any of the rates in force since 2nd April, 1853. The *addition* of a teacher's residence, and an *extension* of school rooms and class room to meet an increase in the attendance of schools to be treated *pro tanto* as a new case.

Schools built with aid of grants in force before 1853, the amount granted to the cost of new floors and new desks and benches to be reduced one-half.

21st January, 1860.—The grants made by the Committee of Council for building, enlarging, improving, or fitting up schools are not to exceed

1. 2s. 6d. per square foot of internal area in new schoolrooms and class-rooms.
2. 25s. per child to be accommodated.
3. 65l. for each teacher's residence.

21st January, 1860.—Their Lordships will not entertain any new applications for grants towards the expense of building, enlarging, improving, or fitting up training colleges.



**VI.—CODES OF THE EDUCATION DEPARTMENT.**

Although the Minutes of the Committee of Council were consolidated in 1858, it was not until 1860 that they were reduced into the form of a Code—the Code of 1860. The Commission appointed in 1858 to inquire into the Popular State of Education in England presented their Report on the 18th March, 1861, and it became necessary to revise the Code in accordance with the recommendations contained therein. This “Revised Code of 1862”—modified as occasions arose—continued in force until after the passing of the Elementary Education Act of 1870.

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**1. THE CODE OF 1860.**

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“Copy of Minutes and Regulations of the Committee of the Privy Council on Education, reduced into the form of a Code.” Dated, Council Office, 19th April, 1860. Ordered by the House of Commons to be printed 27th April, 1860. [Paper No. 252.]

The following are a few of the Articles of this Code :—

**ARTICLE 4.**—The object of the grant is to promote the education of children belonging to the class who support themselves by manual labour.

**ARTICLE 5.**—The means consist in aiding voluntary local exertions, under certain conditions, to establish or maintain schools, which are either

- a. For the instruction of children (elementary); or,
- b. For training schoolmasters and schoolmistresses (normal).

**ARTICLE 8.**—Every school assisted by the grant must be either

- a. A school in connexion with some recognised religious denomination; or,
- b. A school in which, besides secular instruction, the Scriptures are read daily from the Authorised Version.

**ARTICLE 9.**—Aid to establish schools is given by grants towards the cost of building, enlarging, improving, or fitting up elementary schoolrooms and dwellings for elementary teachers.

Aid is no longer given to establish normal schools.

ARTICLE 10.—Aid to maintain schools is given by grants under the heads of

- a.* Books, maps, and diagrams.
- b.* Scientific apparatus.
- c.* Teachers.
- d.* Capitation.

ARTICLE 11.—The grants to normal schools, and the grants to elementary schools under the heads of Teachers and Capitation, are collectively known as “Annual Grants,” being annually payable, at a fixed time, to each school allowed to receive them.

ARTICLE 12.—The grants for building, and for books, maps, diagrams, and apparatus, are not periodical in their character.

ARTICLE 13.—No grants are made to schools which are not open to inspection.

ARTICLE 14.—The Committee of Council consults the religious or educational bodies. . . before making representations to Her Majesty for the appointment of inspectors to visit schools in connexion with these several bodies.

ARTICLE 15.—The inspectors do not interfere with the religious instruction, discipline, or management of schools, but are employed to verify the fulfilment of the conditions on which grants are made, to collect information, and to report the results to the Committee of Council.

ARTICLE 27.—Grants are not made for rooms intended to be used on Sundays only ; nor for rooms under places of worship ; nor to pay off debts already incurred in building ; nor in consideration of former expenditure for building ; nor for maintenance of buildings ; nor for altering or fitting up schools erected with the help of grants at any of the rates in force since 1853.

ARTICLE 224.—Whenever voluntary subscriptions are specified among the conditions of a grant, the proceeds of endowment are excluded from the reckoning.

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[The Table of Grants under the Code of 1860 will be found in the following pages.]

TABLE OF GRANTS UNDER

Purposes.	Schools.	Name of Grant.	Limits of Grant.
1. To establish Schools.	Elementary Schools.	Building grants.	1. Not to exceed the amount voluntarily contributed in the parish, or within four miles radius. 2. Not to exceed 2s. 6d. per square foot of internal area in new school-rooms and class rooms. 3. Not to exceed 25s. per child to be accommodated. 4. Not to exceed £65 for each teacher's residence.
	Normal Schools.	(No longer made.)	
To maintain schools.	Elementary Schools.	1. Books, Maps, and Diagrams.	1. Not to exceed 10d. per head of the number in average attendance. 2. The total cost of the works ordered must not be less than £8.
		2. Scientific Apparatus.	Two-thirds of cost. Cost, exclusive of cabinet, may be £10, £15, or £20.
		3. Teachers : (a) Certificated.	For general service : Masters' Augmentation, £15 to £30. Mistresses' " £10 to £20. For Infant Schools only : Mistresses' Augmentation, £8 to £10.
		(b) Registered.	No augmentation grant, but the annual gratuities for instruction of pupil teachers.
		(c) Pupil Teachers.	Stipends from £10 to £20. Teachers' gratuities for instructing them, £5 to £15.
		(d) Assistant.	£25 (men) or £20 (women).
		(e) Teachers of Industrial Department of Day Schools.	2s. 6d. per child in average attendance instructed by the school-master or schoolmistress, or 5s. per child in average attendance instructed by special industrial teachers.
		(f) Evening Teachers.	£5 to £10 for teachers not otherwise remunerated out of the Education Grant.



THE CODE OF 1860.

Conditions, &c.
<p>Balance of expense not covered by local subscriptions and grant may be met by endowment or outside subscriptions.</p> <p>This may include the area of industrial buildings and of rooms for special instruction in drawing or practical science.</p> <p>There must be a sufficient population of the labouring class in the vicinity.</p> <p>The religious denomination of the new school must be suitable for a sufficient number of families relied upon for supplying scholars.</p> <p>The school must be likely to be maintained in efficiency.</p> <p>The site must be not less than 1,200 square yards.</p> <p>The tenure must be fee simple, if possible ; or leasehold of 99 years with a nominal rent.</p>
<p>20<i>d.</i> per head must be subscribed voluntarily to meet the grant.</p> <p>The works ordered must be selected from a list compiled by the Committee of Council.</p> <p>Grants are not allowed oftener than once in three years, unless the attendance has increased 25 per cent.</p> <p>Schoolmasters' associations may obtain grants equal to 10<i>s.</i> per member, provided an equal sum be subscribed and the members are employed in schools under inspection.</p>
<p>The cost depends on the proficiency of the master, as shewn by examination.</p> <p>Grants may be obtained at the expiration of three years from the date of the original grant, but not exceeding one-half of the original cost, if to replace instruments spoilt by use. Grants are made to schools in which pupil-teachers are apprenticed ; also to schoolmasters' associations.</p>
<p>The amount depends on the certificate the Teacher holds. Special augmentation where Welsh or Gaelic has to be spoken, £10 to £15, with an extra payment of £5 when the Teacher has passed a thoroughly good examination in Welsh or Gaelic.</p> <p>The amount depends on the certificate the Teacher holds. Special augmentation where Welsh or Gaelic has to be spoken, £6 13<i>s.</i> 4<i>d.</i> to £10, with an extra payment of £5 when the Teacher has passed a thoroughly good examination in Welsh or Gaelic.</p> <p>The amount depends on the certificate the Teacher holds.</p> <p>The managers must provide a house or suitable lodgings, a minimum additional salary equal to twice the amount granted by the Committee of Council, one-half of which must be raised by voluntary contributions ; or, if no house or lodging be provided, an additional sum of £10 (£6 13<i>s.</i> 4<i>d.</i> in districts where the special augmentation is given) for a Master, and £6 (£4 in special augmentation districts) for a Mistress.</p> <p>A further augmentation of from £1 to £5 is given for proficiency to teach drawing.</p>
<p>And a further gratuity of from £1 to £3 for teaching the pupil teachers drawing.</p>
<p>Pupil teachers, appointed before 1860, on completion of their apprenticeship can become assistant Teachers. Students in normal schools who have passed the certificate examination may for a time serve as assistants, and receive the same gratuity.</p>
<p>The Industrial Departments of day schools may be : (1) Field Gardens and Workshops, for boys ; and (2) Kitchens, Washhouses, Laundries, and Bakehouses, for Girls.</p>
<p>Evening School Teachers need not be certificated.</p>

TABLE OF GRANTS UNDER

Purposes.	Schools.	Name of Grant.	Limits of Grant.
To Maintain Schools.	Elementary Schools -	4. Capitation Grant -	Grant per Head :— If number of scholars be under 50, 6s. for boys, 5s. for girls. If number of scholars be between 50 and 100, 5s. for boys, 4s. for girls. If number of scholars be over 100, 4s. for boys, 3s. for girls.
	Normal Schools -	1. Books, Maps and Diagrams.	10s. per student - - - -
		2. Scientific Apparatus.	May not exceed two-thirds of the Total Cost, nor £100.
		3. Certificated Assistants.	Same augmentation to resident assistant teachers who are certificated as is given to certificated teachers in charge of schools.
		4. Lectures - - -	Annual Grant of £100 - - -
		5. Queen's Scholarships.	£23 for men, and £17 for women, per annum. Queen's Scholars of the 1st Class are paid a personal allowance of from £4 to £6 (men), or £3 to £4 (women).
		6. Examination of Students.	£13 to £24 for examination passed by men, and two-thirds of the same for women.
Pensions - - -	- - - -	Teachers' Pensions -	The maximum Number and Value Receivable at one time :— £ 20 Pensions of £30 each = 600 100 " £25 " = 2,500 150 " £20 " = 3,000 Donations or special gratuities - - - 400 £ 6,500
Ragged Schools - - (Grants are also made to Certified Industrial Schools.)	- - - -	(a). Building - - (b). Books, Maps, and Diagrams. (c). Rent of premises - (d). Tools, and raw material for labour. (e) Average Attendance. (f). Teacher's Augmentation.	As to elementary schools - - - - - ditto. One-half of premises in which industrial instruction is carried on. One-third of the cost. 5s. per annum per scholar. As in elementary schools

THE CODE OF 1860—*continued.*

Conditions.
<p>Scholars (other than half-timers) must have attended 176 whole week-days, and have satisfied the managers of the cause of their absence on at least 16 other days, and have paid from 2s. to 16s. in school fees. Evening scholars must have attended 50 times per annum, and be over 12 years of age. The income of the school must be at least equal to 14s. per scholar in schools under masters, and 12s. in schools under mistresses. The Grant is paid for boys in schools under mistresses at the same rate as for girls. Seven-tenths of the Capitation Grant may be reckoned as voluntary subscriptions for the purposes of the Augmentation Grant. The Capitation Grant is paid to managers, and becomes part of the ordinary school funds.</p>
<p>To meet 20s. contributed by the applicants.</p>
<p>_____</p>
<p>_____</p>
<p>To meet an additional £150 granted by the College. Lecturers must have proved their capability by examination to teach History, English Literature, Geography, Physical Science, or Applied Mathematics. No grants are given to more than three lecturers at any one College.</p>
<p>Paid to College for tuition, board, lodging, washing, and medical attendance of the Queen's Scholar.</p>
<p>Paid to the College at the end of each of two years' residence.</p>
<p>Annual sums of £1,000 to the National Society, of £750 to the British and Foreign School Society, and of £500 to the Education Committee of the General Assembly of the Established Church of Scotland, are allowed for the general support of normal schools connected with these bodies.</p>
<p>To teachers who have conducted a school for at least 15 years, and have become incapable, by age or infirmity, of continuing to teach. The pension in no case to be more than two-thirds of the average salary and emoluments received.</p>
<p>No school fees must be received from any scholar in a Ragged School receiving grants.</p>



## 2. THE REVISED CODE OF 1862.

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"Having considered the Report of the Commissioners appointed by Warrant under the Queen's Sign Manual, on 30th June, 1858, to inquire into the present state of popular education in England," the Lords of the Committee of the Privy Council on Education "resolved To revise the Code of Minutes and Regulations (House of Commons Paper, No. 252, Session 1860), under which the grant is now distributed," and by a meeting of the 29th July, 1861, established "A Revised Code of Regulations." This Revised Code was presented at the end of the Session to both Houses of Parliament by command of Her Majesty. It provided *inter alia* that children should be examined for grants according to their age. "During the recess, and in the present session, the provisions of this Code have undergone protracted discussion, and have been considerably modified in consequence ; we append the Code in its present form in our Report" (Report of the Committee of Council on Education, 1861-2).

"The principal recommendations of the Commissioners which we endeavoured to meet" (continues the Report) "were :—

1. That grants should be expressly apportioned upon the examination of individual children.
2. That means should be taken for reaching more rapidly the places not hitherto aided with the money voted for public education.
3. That the administration of the grants should be simplified, not merely as regards the office work of the clerks, but in the much larger and more important sense of withdrawing your Majesty's Government from direct financial interference between the managers and teachers of schools."

The Minute confirming the Revised Code thus altered is dated the 9th May, 1861, and by it it was resolved :—

To confirm the Code thus altered, and to adopt the following course for putting it into effect :—

1. The Revised Code shall regulate all grants to be made upon applications received after the 30th June, 1862.
2. The Revised Code shall regulate the engagement of all new pupil-teachers in schools when the next inspection falls due after the 30th June, 1862.
3. Until 30th June, 1863, the annual grants falling due at the end of each school year shall be paid according to the Code of 1860 in all schools from which application for them has been made before 30th June, 1862.

In Scotland grants shall continue to be made as before.

By this Revised Code :—

The conditions as to building grants are about the same as in the Code of 1860, except that the former limit of grant to 25s. per child is omitted (Articles 22-37).

No grants are given for books, maps, diagrams, or scientific apparatus, in augmentation of teachers' salaries, or for stipends, etc., to pupil-teachers.

Aid to maintain schools is given by grants to the managers conditional upon the attendance and proficiency of the scholars, the qualifications of the teachers, and the state of the school (Article 10).

The managers of schools may claim at the end of each year :—

- a. The sum of 4s. per scholar according to the average number in attendance throughout the year at the *morning and afternoon* meetings of their school, and 2s. 6d. per scholar according to the average number in attendance throughout the year at the *evening* meetings of their school.
- b. For every scholar who has attended more than 200 morning or afternoon meetings of their school :
  1. If more than six years of age 8s., subject to examination.
  2. If under six years of age 6s. 6d., subject to a report by the inspector that such children are instructed suitably to their age, and in a manner not to interfere with the instruction of the older children. (By the Code of 1865 children under six years of age must be present on the day of inspection.)
- c. For every scholar who has attended more than 24 evening meetings of the school 5s., subject to examination. (Article 40.)

An attendance was at least 2 hours at a morning or afternoon meeting and 1½ at an evening meeting. (Article 41.)

(By the Code of 1865, Day Schools must have been open at least 400 times in a year, and Evening Schools at least 40 times).

Evening attendances may not be reckoned for any scholar under 12 years of age (Article 43).

Every scholar attending more than 200 times in the morning or afternoon, for whom 8s. is claimed, forfeits 2s. 8d. for failure to satisfy the inspector in reading, 2s. 8d. in writing, and 2s. 8d. in arithmetic (Article 44).

Every scholar attending more than 24 times in the evening for whom 5s. is claimed, forfeits 1s. 8d. for failure to satisfy the inspector in reading, 1s. 8d. in writing, and 1s. 8d. in arithmetic (Article 45).

Scholars must be presented in a standard, and not a second time in the same or a lower standard (Article 46). (The Evening Scholars by the Code of 1868 were allowed to be presented a second time in the same or a lower standard).

The grant is withheld if the premises are not satisfactory ; if the teacher is not certificated, and duly paid (Teachers certificated before the 31st March, 1864, have a first charge on the Grant) if the girls are not taught plain needle-work, or if registers are not accurately kept, etc. The Grant is reduced for faults of instruction, or defects in the premises, etc. ; by the sum of 10*l*. if there be not a pupil-teacher for every 40 scholars (or an assistant for every 80) after the first 50 ; or by its excess above (a) the amount of school fees and subscriptions, or (b) the rate of 15*s*. per scholar in average attendance (Article 51).

(By the Code of 1864, the Grant was reduced by the amount of any annual endowment, but by the Code of 1866 such reduction was suspended as long as the grant and the endowment together did not exceed the rate of 15*s*. per scholar).

Pupil-teachers admitted before the 30th June, 1862, and the masters and mistresses by whom they are instructed have a second charge on the Grant, and if the Grant be not sufficient, the Committee of Council will make up the deficiency (Article 54).

Annual Grants are made to Normal Schools under the heads of (1) Certificated Assistant Teachers, Lecturers, Exhibitions (Queen's Scholarships) for candidates entering, by competitive examination, or who belong to certain specified classes ; allowances, according to examinations passed at the end of each of the two years of residence in the school ; and the same Grants to the Practising Department as to other Elementary Schools.

These Grants are similar to those in the Code of 1860. [By the Code of 1864, the Grants to Certificated Assistant Teachers and to Lecturers were abolished. By the Code of 1868 it was declared that instead of the Exhibitions (for candidates entering) and of the allowance (according to the examination passed at the end of each of the two years of residence) there should be one payment of £100 for each master trained for two years, and of £70 for each mistress, and that half of these sums should be paid for teachers trained for one year only.]

The annual sums of £1,000 to the National Society, and of £750 to the British and Foreign School Society, continued under the Code of 1860 for the general support of Normal Schools connected with these bodies ; also grants under the heads of Books and Scientific Apparatus, etc., were discontinued.

Ragged Schools and Certified Industrial Schools had by 23 and 24 Vict. c. 108 ceased to be made chargeable for inspection or maintenance to the grants for Public Education, and had become chargeable to that for Law and Justice. No reference is, therefore, made to them in the Revised Code. Nor were there grants offered for Pensions to teachers.

Articles 4, 5, 8, 9, 13, 14, 15, 27, and 224 of the Code, 1860 (*ante*) appear in the Revised Code with a few slight modifications.

No grants are made to endowed schools in which the endowment yields more than 30*s*. per scholar per annum according to the average number of scholars in attendance throughout the year (Article 136). (In the Code of



1864 this article was omitted, as a fresh article declared that "annual grants to endowed schools are reduced by the amounts of their income from endowments (Article 93 (3), but the Code of 1866, suspended the reduction as long as the grant and endowment together did not exceed the rate of 15s. per scholar.")

By the Code of 1865 provision was made for grants to be given to small Rural Schools each under their own resident *uncertificated* teacher, provided that a certificated teacher spent two clear hours at least once a week at each school, and the whole of the united schools were assembled once per annum for inspection. Also by the same code, arrangements were made for the managers examining their own evening schools.

By a Minute of the Lords of the Committee of the Privy Council for Education of the 20th February, 1867 (incorporated into the Code of 1868), it was resolved to make an additional grant of 1s. 4d. per pass in reading, writing and arithmetic, up to a sum of £8 for any one school (department), provided

1. That the number of teachers allowed for one certificated or one assistant for every 80 scholars, or one pupil-teacher for every 40 scholars, after the first 25 of the average number of scholars in attendance;
2. The number of passes in Reading, Writing, and Arithmetic exceed 200 per cent. of the annual average number of scholars in attendance over 6 years of age, and that one-fifth of such passes are in Standards IV.-VI.; and
3. The time-table of the school provides for one or more specific subjects of secular instruction beyond Reading, Writing, and Arithmetic, and that at least one-fifth of the scholars over 6 years of age pass a satisfactory examination therein.

Also to pay grants to all schools, providing these extra teachers, of from £5 to £10 for all male pupil-teachers entering Training Colleges, and an additional grant of from £5 to £8 on his passing in the first or second division in the examination at the end of his first year's residence.

The Revised Code of 1862, modified by yearly alterations (the chief of which, relating to the grant, have been mentioned), remained in force for Elementary Schools until the 31st March, 1871, and for United Schools and Evening Schools until the 29th February, 1872, and for Training Schools up to 31st December, 1870.

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[The Table of Grants under the Revised Code will be found in the following pages.]

The following TABLE shews the GRANTS made to **ELEMENTARY**

Schools.	Description of Grant.	Purposes of Grant.	Amount of Grant.
Elementary Schools	Building Grants.	School - rooms and class-rooms.	2s. 6d. per square foot of internal area in new rooms.
		Teacher's Residences.	£65 for each.
	Annual Grants.	Average Attendance : Day Schools.	4s. per scholar.
		Evening Schools.	2s. 6d. per scholar.
		Examination : Day Schools.	2s. 8d. for each pass in Reading, Writing, and Arithmetic.
		Evening Schools.	1s. 8d. for each such pass.
		Without examination : Day Schools.	6s. 6d. for each scholar suitably instructed.
		Specific Subjects.	—
Normal Schools.	Certificated Assistant Teacher, &c.	Each teacher.	£23-£30 (men) or £15 to £20 (women).
	Lecturers.	Each lecturer.	£100
	Exhibitions (Queen's Scholarships).	Each Scholar.	£23 (men) or £17 (women). Personal Payments £3-£6.
	Allowances according to Examination passed at end of each of two years of residence in the school.	Each Scholar.	£13-£24 (men). Two-thirds of these amounts for women.
	Practising Schools (same grants as to Elementary Schools).		

and NORMAL SCHOOLS under the Revised Code, 1862-70.

Conditions of Grant.	Alterations made in Revised Code between 1862 and 1870.
As in the Code of 1860.	
As in the Code of 1860.	
	In 1865 it was required that Day Schools should have been open at least 400 times in the year. In 1865 it was required that Evening Schools should have been open at least 40 times in the year.
Every scholar must be over six years of age, and have made over 200 attendances.  Every scholar must be over twelve years of age, and have made over 24 attendances.	
Every scholar must be under six years of age, and have made over 200 attendances.	In 1865 it was required that those claiming a grant must be present on the date of the examination.
	In 1868 this grant first appeared in the Code. If one-fifth of the scholars over six years of age pass in one or more specific subjects beyond reading, writing, and arithmetic, and other conditions were observed, an extra grant of 1s. 4d. per pass in reading, writing, and arithmetic was to be made. A limit of £8 was set on this extra grant.
The teacher must hold a certain certificate, and the Committee of Council must approve of branches of instruction committed to him.	In the Code for 1864 there was substituted for these payments £100 for each master trained for two years, and £70 for each mistress; or half the sums for one year's training.
The lecturer must have passed an examination. No more than three lecturers are allowed to each college.	
Queen's scholars must be over eighteen years of age, and intend <i>bona fide</i> to follow the profession of teachers in elementary schools. The authorities of the college, in return for the grant, must provide tuition, board, lodging, &c.	
It becomes a part of the ordinary school funds in the hands of the college authorities.	



VII.—STATISTICS FROM THE REPORTS OF THE COMMITTEE  
OF COUNCIL ON EDUCATION.

During the whole period under review the Education Department administered grants for the whole of Great Britain, and it is now impossible, in certain cases, to separate the statistics of England and Wales from those of Scotland. At the heading of every list there is an entry showing whether the figures relate to the whole of Great Britain or to England and Wales only. It is also impossible to carry all the tables back to the beginning of the period, as figures which were afterwards considered important were at first disregarded. The alteration of the date of the Returns and of the form in which the Statistics were kept as improvements were made, allow in some instances only of approximate figures being given.

1. TABLE illustrating the gradual increase of the Grants voted by Parliament to the Committee of Council on Education :—

Year.	Grant.	Year.	Grant.
	£		£
1839	30,000	1849	125,000
1840	30,000	1850	125,000
1841	30,000	1851	150,000
1842	40,000	1852	160,000
1843	50,000	1853	260,000
1844	40,000	1854	263,000
1845	75,000	1855	396,921
1846	100,000	1856	451,213
1847	100,000	1857	541,233
1848	125,000	1858	<u>663,435</u> ✓

During these 20 years the total amount voted by Parliament was thus £3,755,802. In addition to which sum £22,282 2s. 0d. had been transferred from the balance of the Treasury Grants, and £705 4s. 8d. had been returned from the managers of schools, making a total of £3,778,789 6s. 8d. Of this amount the Committee had expended £3,655,067 14s. 9½d., leaving a balance in hand, on the 31st December, 1858, of £123,721 11s. 10½d.

2.—EXPENDITURE from Education Grants in GREAT BRITAIN,  
1839-1870.

Classified according to Object of Grant.

	£
Building, enlarging, and furnishing Elementary and Normal Schools . . . . .	1,746,694
Books, Maps, Diagrams, and Scientific Apparatus . . . . .	52,521
Augmentation of Salaries of Certificated Teachers . . . . .	1,157,893
Stipends of Pupil-Teachers, and Gratuities to Teachers instructing them . . . . .	2,859,279
Stipends of Assistant Teachers . . . . .	69,662
„ Teachers in Night Schools . . . . .	13,568
Special Allowances for Drawing . . . . .	9,899
Annual Grants to Training Colleges . . . . .	1,389,600
Grants to Industrial Schools and to Industrial Classes in connection with Elementary Day Schools . . . . .	101,596
Pensions . . . . .	9,912
Capitation Grants under the Old Code in England and Wales . . . . .	473,947
Annual Grants under the Revised Code in England and Wales :—	
For Day Scholars . . . . .	3,225,656
For Night Scholars . . . . .	110,677
Payments made from the Vote for Public Education by the Treasury in 1843, 1850, 1853, and 1854 . . . . .	11,604
Administration—Inspection, Office in London, &c.* . . . .	1,314,051
£	12,546,559

\* In the earlier years part of the cost of the office in London was borne on the grant for the establishment of the Council Office.

## 3.—THE SAME PARTICULARS ARRANGED,

Year.	Building Grants.	Books, Maps, &c.	Certificated Teachers.	Pupil Teachers.	Assistant Teachers.	Teachers in Night Schools.	Drawing.	Annual Grants to Training Colleges.
	£	£	£	£	£	£	£	£
1840	9,909	—	—	—	—	—	—	—
1841	29,783	—	—	—	—	—	—	—
1842	29,618	—	—	—	—	—	—	—
1843	27,337	—	—	—	—	—	—	—
1844	34,284	—	—	—	—	—	—	2,250
1845	46,085	—	—	—	—	—	—	2,750
1846	50,053	—	—	—	—	—	—	2,250
1847	48,628	—	—	—	—	—	—	2,590
1848	57,002	617	1,243	6,735	—	—	—	3,615
1849	53,735	2,937	5,443	24,118	—	—	—	4,883
1850	85,784	1,878	10,783	54,929	—	—	—	6,680
1851	36,394	1,715	15,474	78,000	—	—	—	10,513
1852	49,468	2,646	16,975	79,587	—	—	—	17,545
1853	32,678	2,895	26,778	139,040	81	—	—	19,197
1854	59,607	1,866	37,647	138,380	2,635	—	—	39,394
1855	77,443	2,884	44,878	143,807	4,556	—	—	39,960
1856	84,057	3,957	52,088	158,229	5,050	—	—	45,785
1857	119,664	7,808	64,491	192,248	5,544	—	—	57,221
1858	151,214	5,718	73,727	220,082	5,905	1,595	359	73,732
1859	137,207	6,145	86,777	252,551	6,245	1,321	750	89,588
1860	118,127	4,833	101,758	257,558	7,182	1,636	1,490	92,329
1861	110,455	5,992	129,637	301,827	8,701	2,192	2,253	104,431
1862	65,988†	630	139,185	297,070	9,441	1,842	2,488	104,701
1863	41,157	—	113,662	222,478	7,867	1,448	2,057	114,217
1864	28,306	—	25,273‡	41,220‡	1,165‡	305‡	133‡	96,167
1865	18,883	—	31,078	37,439	1,513	292	138	75,624
1866	23,216	—	32,545	36,840	1,565	550	165	77,442
1867	25,002	—	32,909	37,351	1,173	574	66	74,478
1868	32,889	—	35,442	38,351	669	517	—	73,692
1869	32,889	—	39,793	47,548	290	659	—	75,900
1870	29,832	—	40,307	53,891	80	637	—	82,666
	1,746,694	52,521	1,157,893	2,859,279	69,662	13,568	9,899	1,389,600

\* The actual expenditure in 1861 was £813,441. The total given above includes certain payments (including £11,604 paid by the Treasury in 1843-54) made prior to 1861 and not previously brought to account.

† By the Minutes of 21st January, 1860 building grants to Normal Schools were to be discontinued.



APPROXIMATELY, UNDER YEARS.

Industrial Schools, &c.	Pensions.	Capitation Grants under Old Code.	Annual Grants under Revised Code.		Total Grants.	Adminis- tration.	Total Expendi- ture
			Day School.	Night Schools.			
£	£	£	£	£	£	£	£
—	—	—	—	—	9,909	733	10,642
—	—	—	—	—	29,783	1,587	31,370
—	—	—	—	—	29,618	2,286	31,904
—	—	—	—	—	27,337	2,019	29,356
—	—	—	—	—	36,534	2,168	38,702
—	—	—	—	—	48,835	5,492	54,327
—	—	—	—	—	52,203	5,979	58,282
—	—	—	—	—	51,218	10,904	62,122
—	—	—	—	—	69,212	14,195	83,407
—	—	—	—	—	91,116	18,833	109,949
23	20	—	—	—	160,097	32,929	193,026
113	20	—	—	—	142,229	22,117	164,346
192	70	—	—	—	166,483	22,373	188,856
281	138	—	—	—	221,088	29,571	250,659
865	147	5,957	—	—	286,498	39,538	326,036
1,678	259	10,126	—	—	325,591	44,011	369,602
8,159	394	20,080	—	—	377,799	45,834	423,633
19,105	717	39,362	—	—	506,160	53,814	559,974
27,026	620	49,523	—	—	609,501	59,373	668,874
18,028	538	61,183	—	—	660,333	62,783	723,116
9,748	639	63,897	—	—	659,197	65,206	724,403
9,311	785	77,240	—	—	752,824 11,604	69,106	833,534*
3,991	793	82,527	—	—	708,656	66,087	774,743
2,409	640	63,852	82,186	1,172	653,145	68,247	721,392
180	625	200	380,101	6,623	580,298	74,744	655,042
110	660	—	386,304	9,821	561,862	74,948	636,810
107	631	—	413,038	12,473	598,572	76,963	675,535
91	626	—	412,331	14,581	599,182	79,975	679,157
58	564	—	465,493	18,308	665,983	84,503	750,486
56	506	—	516,014	21,575	735,230	87,483	822,713
65	520	—	570,189	26,124	804,311	90,250	894,561
101,596	9,912	473,947	3,225,656	110,677	11,232,508	1,314,051	12,546,559

\* After the 30th June, 1862, grants to Certificated, Assistant and Pupil Teachers, to Teachers in Night Schools and for Drawing are confined to Schools in Scotland.

4.—THE following is the List of Normal Schools whose Building, Enlargement, or Improvement was aided by the Building Grants of the Education Department.

NAME.		AMOUNT GRANTED.	DATES OF PAYMENT.
		£ s. d.	
CHURCH OF ENGLAND.	Carnarvon, <i>Male</i> - - - - -	2,150 0 0	1858
	Cheltenham, <i>Male</i> - - - - -	4,900 0 0	1850, 1855
	„ <i>Female</i> - - - - -		
	Highbury (Metropolitan), <i>Male</i> - - -	4,860 15 0	1850, 1854, 1857
	Peterborough, <i>Male</i> - - - - -	2,000 0 0	1864
	Battersea, <i>Male</i> - - - - -	3,790 0 0	1842, 1847, 1852, 1854
	Chelsea, St. Mark's, <i>Male</i> - - -	8,192 15 5	1842, 1855, 1858
	NATIONAL SOCIETY'S, at Whitelands, <i>Female</i> - - -	4,770 0 0	1851, 1856
	Carmarthen, <i>Male</i> - - - - -	4,845 0 0	1848, 1849, 1861
	Bishop's Stortford (Rochester), <i>Female</i> - - - - -	3,224 0 0	1854
	Brighton (Chichester), <i>Female</i> - - -	2,000 0 0	1855
	Fishponds (Gloucester and Bristol and Oxford), <i>Female</i> - - -	5,275 0 0	1854, 1857, 1860
	Chester, <i>Male</i> - - - - -	3,762 6 8	1843, 1845, 1849, 1855
	Chichester, <i>Male</i> - - - - -	1,171 0 0	1851, 1854
	Culham (Oxford), <i>Male</i> - - - - -	6,000 0 0	1853
	Derby (Lichfield), <i>Female</i> - - - - -	2,000 0 0	1851
	Durham, <i>Male</i> - - - - -	2,930 15 0	1847, 1854, 1857, 1858
	DIOCESAN, at „ <i>Female</i> - - - - -	2,645 0 0	1858
	Exeter, <i>Male</i> - - - - -	2,000 0 0	1854
	Norwich, <i>Female</i> - - - - -	1,304 10 0	1844, 1859, 1860
	Salisbury, <i>Female</i> - - - - -	2,500 0 0	1852
	Saltley (Worcester), <i>Male</i> - - - - -	6,313 8 2	1852, 1858, 1859
	Truro (Exeter), <i>Female</i> - - - - -	1,500 0 0	1859
	Warrington (Chester), <i>Female</i> - - -	3,890 0 0	1854, 1858
	Winchester, <i>Male</i> - - - - -	2,000 0 0	1862
	York (York and Ripon), <i>Male</i> - - -	4,975 0 0	1846, 1859
	Ripon „ <i>Female</i> - - - - -	2,475 0 0	1863
	BRITISH AND FOREIGN SCHOOL SOCIETY'S, at Borough Road, Southwark - - -	5,103 7 6	1842, 1858
	Stockwell, Surrey, <i>Female</i> - - -	5,100 0 0	1861
	Bangor, <i>Male</i> - - - - -	2,000 0 0	1863
	WESLEYAN, in Horseferry Road, Westminster - - -	5,049 10 0	1852, 1856
	HOME AND COLONIAL SCHOOL SOCIETY'S (Gray's Inn Road) - - - - -	6,000 0 0	1856
	ROMAN CATHOLIC, at Hammersmith, <i>Male</i> - - -	3,900 0 0	1852, 1856
	SCOTLAND - - - - -	19,339 18 0	1844-1859
TOTAL - - - - -		137,967 5 9*	

\* In addition to this amount, there was the grant to the Kneller Hall Government Training College.

5.—EXPENDITURE FROM EDUCATION GRANTS IN GREAT BRITAIN,  
1839-1870.

*Classified according to Denomination of Recipients.*

		£.
On Schools connected with :—		
Church of England	- - - - -	7,367,583
British and Foreign School Society	- - - - -	1,175,622
On Wesleyan Schools	- - - - -	582,932
On Roman Catholic Schools (England and Wales)	- - -	482,910
On Parochial Union Schools	- - - - -	78,173
SCOTLAND	On Schools Connected with :—	1,531,994
	Established Church - - - - -	
	Free Church - - - - -	
	Episcopal Church - - - - -	
	On Roman Catholic Schools - - - - -	
Other Schools	- - - - -	190
Administration (Great Britain)	- - - - -	1,314,051
Transferred in 1857 under head of Scientific Apparatus to account of Department of Science and Art. towards the expense of establishing the Educational Division of the Museum at Kensington		1,500
Payments made from the Vote for Public Education by the Treasury in 1843, 1850, 1853, and 1854		11,604
Total		£12,546,559



6. —THE SAME PARTICULARS GIVEN, APPROXIMATELY, UNDER YEARS

YEAR.	ENGLAND.						SCOT- LAND.	Adminis- tration.	&c.	TOTAL EXPENDI- TURE.	TOTAL EXPENDI- TURE FROM 1839.
	Church of England Schools.	British and Foreign Society's Schools.	Wesleyan Schools.	Roman Catholic Schools.	Parochial Union Schools.	TOTAL (England).					
1840	£ 3,149	£ 3,923	—	£ —	£ —	£ 7,072	£ 2,837	£ 733	£ —	£ 10,642	£ 10,642
1841	13,205	10,945	—	—	—	24,150	5,633	1,587	—	31,370	42,012
1842	24,962	991	—	—	—	25,953	3,665	2,286	—	31,904	73,916
1843	22,105	2,384	222	—	—	24,711	2,626	2,019	—	29,356	103,272
1844	27,867	2,149	—	—	—	30,016	6,518	2,166	—	38,702	141,974
1845	42,559	3,837	—	—	—	46,396	2,439	5,492	—	54,327	196,301
1846	44,004	3,548	—	—	—	47,552	4,751	5,979	—	58,282	254,583
1847	45,100	4,010	250	—	—	49,360	1,858	10,904	—	62,122	316,705
1848	53,876	4,972	1,034	—	—	59,882	9,323	14,195	(a) 7	83,407	400,112
1849	69,779	7,255	3,113	73	22	80,242	10,840	18,833	(a) 34	109,949	510,061
1850	92,318	9,730	5,483	1,521	37,862	146,914	13,109	32,929	(a) 74	193,026	703,087
1851	100,078	13,362	5,716	2,891	8,209	130,256	11,965	22,117	(a) 8	164,346	807,433
1852	102,831	16,238	14,612	6,286	5,053	145,020	21,442	22,373	(a) 21	188,856	1,056,289

1853	149,295	22,195	10,019	7,931	5,353	194,793	26,249	29,571	(a) 46	250,659	—	1,306,948
1854	190,693	30,296	14,769	9,021	5,528	247,307	39,191	39,538	—	326,036	—	1,632,984
1855	221,306	31,528	12,699	11,586	5,188	282,307	43,284	44,011	—	369,602	—	2,002,586
1856	249,338	37,088	21,513	15,667	896	324,502	53,297	45,834	—	423,633	—	2,426,219
1857	337,905	47,873	31,758	19,713	618	437,867	66,793	53,814	(b) 1,500	559,974	—	2,986,193
1858	404,112	51,907	40,474	31,023	1,012	528,528	80,973	59,373	—	668,874	—	3,655,067
1859	438,307	67,065	35,883	30,881	721	572,857	87,476	62,783	—	723,116	—	4,378,183
1860	437,643	65,361	37,678	29,739	1,110	571,531	87,666	65,206	—	724,403	—	5,102,586
1861	498,471	78,859	37,775	32,787	2,740	650,632	102,192	69,106	(c) 11,604	833,534	—	5,936,120
1862	470,429	71,763	38,115	28,991	1,365	610,663	97,993	66,087	—	774,743	—	6,710,863
1863	416,393	70,858	36,123	29,878	811	554,063	99,082	68,247	—	721,392	—	7,432,255
1864	374,441	61,822	28,302	26,451	327	491,343	88,955	74,744	—	655,042	—	8,087,297
1865	360,636	59,771	28,156	26,930	758	476,251	85,611	74,948	—	636,810	—	8,724,107
1866	383,192	63,588	32,047	28,580	120	507,527	91,045	76,963	—	675,535	—	9,399,642
1867	386,099	65,410	32,471	29,458	120	513,558	85,624	79,975	—	679,157	—	10,078,799
1868	429,434	77,807	35,298	32,885	120	575,544	90,439	84,503	—	750,486	—	10,829,285
1869	468,097	89,322	39,207	36,445	120	633,191	102,039	87,483	—	822,713	—	11,651,998
1870	509,959	99,765	43,215	44,173	120	697,232	107,079	90,250	—	894,561	—	12,546,559
Total	7,367,583	1,175,622	582,982	482,910	78,173	9,687,920	1,531,994	1,314,051	13,294	12,546,559	—	—

(a) Other Schools; (b) To Science and Art Department; (c) Treasury Payments 1843-54.

## 7.—ELEMENTARY SC

The following TABLE, taken from the Report of the Committee of C  
improved, with aid from Parliamentary Grants; Total amount *granted*;  
for whom *accommodation* has been provid

Denominations.	Number of School-houses.*							Total Amount awarded out of Parliamentary Grants.	Total Amount subscribed by Promoters.	Total An expend
	Built.						Enlarged or improved.			
	Institutions.†	Number of de- partments com- prised in those institutions.‡				Residences.				
		Juvenile.			Infants.					
		Boys.	Girls.	Mixed.						
ENGLAND AND WALES.								£ s. d.	£ s. d.	£
National or Church of England Schools -	4,165	1,731	1,696	1,955	1,126	2,681	1,948	1,237,363 6 3d	3,097,526 7 6d	4,334,883
British and Foreign Schools -	261	162	136	84	69	121	197	99,243 17 10d	194,036 1 9d	293,279
Wesleyan Schools -	128	38	38	85	61	92	42	77,612 0 4	140,091 15 10	217,705
Roman Catholic Schools (in Great Britain) -	61	41	39	12	30	32	15	40,614 9 10	86,453 15 8	127,068
SCOTLAND.										
Church of Scotland Schools -	231	56	82	138	20	124	60	62,167 0 1d	130,734 11 10d	192,901
Free Church, and other Schools not connected with Church of Scot- land -	164	46	48	112	11	100	54	35,967 5 11	73,611 18 2d	109,579
Episcopal Schools -	6	4	5	1	1	7	3	3,851 1 6	6,592 14 7	10,443
Total -	5,016	2,078	2,044	2,387	1,318	3,157	2,319	1,666,319 2 10d	3,729,043 0 6d	5,285,862

\* Exclusive of Training Colleges.

† Held in separate buildings, and separately managed.

‡ In which separate teachers are employed.



## IN GREAT BRITAIN.

on Education, 1870-71, shows the number of School-houses *built, enlarged, or amount subscribed by Promoters*; Total amount *expended*; and Number of Children *for Years 1839 to 1870 inclusive*.

Number of Children for whom New Schools have been built.‡					Number of Children for whom existing Schools have been enlarged.‡					Number of Children for whom Accommodation has been created.‡				
Juvenile.			Infants.	Total.	Juvenile.			Infants.	Total.	Juvenile.			Infants.	Total.
Boys.	Girls.	Mixed.			Boys.	Girls.	Mixed.			Boys.	Girls.	Mixed.		
220,614	205,682	203,525	123,341	753,162	19,711	14,873	9,503	18,913	63,000	240,325	220,555	213,028	142,254	816,162
24,210	19,760	11,645	8,508	64,123	2,550	1,686	755	2,601	7,592	26,760	21,446	12,400	11,109	71,715
7,636	6,155	17,693	9,409	40,893	788	463	444	256	1,951	1,424	6,618	18,137	9,565	43,844
8,701	7,732	1,328	3,874	21,635	89	145	82	232	548	8,790	7,877	1,410	4,106	20,183
8,815	9,949	14,735	1,660	35,159	1,169	725	1,394	318	3,606	9,984	10,674	16,129	1,078	38,765
5,396	5,127	10,869	606	23,998	621	451	677	177	1,926	6,017	5,578	13,546	783	25,924
546	746	211	96	1,599	—	88	331	36	455	546	834	542	132	2,054
275,918	255,151	262,006	147,194	940,509	24,928	18,431	13,186	22,538	70,078	300,846	273,582	275,192	170,027	1,019,647

‡ At the rate of 8 square feet of superficial area per child. | It must be noted that the figures in this group of columns are confined to those cases in which the *superficial area* of schoolrooms has been *increased*. The total number of schools enlarged or improved includes a considerable proportion of cases in which fixtures, or the like have been provided *without any extension of area*.

## 8.—TRAINING COLLEGES IN GREAT BRITAIN.

The following TABLE, taken from the REPORT of the COMMITTEE of COUNCIL on EDUCATION, 1870-71, shows the ORIGINAL COST of BUILDINGS, EXPENDITURE in 1870, and NUMBER of STUDENTS in 1871.

DENOMINATION.	Original Cost of Buildings.			Amount of Expenditure for Year 1870.				Number of Students in 1871.			
	Subscribed	Granted by Committee of Council.		Total.	Granted by Committee of Council.		Balance from other Sources.	Total.	Resident.		Room for
		£ s. d.	£ s. d.		£ s. d.	£ s. d.			Male.	Female.	
Church of England -	£ 085 14 14	91,474 10	3285,560 4 48	£ s. d.	54,317 15 2	8,609 17 3	£ s. d.	62,927 12 5	780	1,560	Male. 925
British -	40,425 9 7	12,203 7 6	52,628 17 1	£ s. d.	7,491 19 4	1,615 2 0	£ s. d.	9,107 1 4	162	286	Female. 125
Wesleyan -	33,101 9 3	5,049 10 0	38,150 19 3	£ s. d.	5,140 3 4	2,273 8 2	£ s. d.	7,413 11 6	76	136	Total. 296
Congregational -	—	—	—	£ s. d.	1,969 10 5	773 12 3	£ s. d.	2,743 2 8	24	50	Male. 84
Home and Colonial -	1,600 0 0	6,000 0 0	7,600 0 0	£ s. d.	4,698 10 0	1,454 11 11	£ s. d.	6,153 1 11	—	140	Female. 25
Roman Catholic -	9,630 0 8	3,900 0 0	13,530 0 8	£ s. d.	4,867 8 7	808 3 2	£ s. d.	5,675 11 9	70	143	Total. 140
Scotch :—											Male. 73
Established -	14,699 7 10½	11,847 8 0	26,546 15 10½	£ s. d.	7,549 7 8	725 7 9	£ s. d.	8,274 15 5	140	276	Female. —
Free Church -	14,467 18 6	7,492 10 0	21,960 8 6	£ s. d.	8,286 5 2	81 18 4	£ s. d.	8,368 3 6	132	317	Total. —
Episcopal -	—	—	—	£ s. d.	619 10 0	301 5 7	£ s. d.	920 15 7	—	25	Male. 26
Grand Totals -	308,010 0 0½	137,987 5 5	9445,977 5 9½	£ s. d.	94,940 9 8	16,643 6 5	£ s. d.	111,583 16 1	1384	2,053	Male. 1,244
											Female. 2,619

\* The students of these training schools are non-resident.

† The cost of Kneller Hall Training College is not included in this Table.

9.—LIST OF TRAINING SCHOOLS IN GREAT BRITAIN UNDER  
INSPECTION, 1870.

*Training Schools for Masters only. (15—all in England and Wales.)*

<i>b.</i> BANGOR (British and Foreign School Society's).	<i>a.</i> DURHAM (Diocesan).
<i>a.</i> BATTERSEA (National Society's).	<i>a.</i> EXETER (Diocesan).
<i>b.</i> BOROUGH ROAD (British and Foreign School Society's).	<i>f.</i> HAMMERSMITH, ST. MARY'S (Roman Catholic).
<i>a.</i> CARMARTHEN (National Society's).	<i>a.</i> PETERBOROUGH (Church of England).
<i>a.</i> CARNARVON (Church of England).	<i>a.</i> SALTLEY, near Birmingham (Worcester Diocesan).
<i>a.</i> CHELSEA, ST. MARK'S (National Society's).	<i>a.</i> WINCHESTER (Diocesan).
<i>a.</i> CHESTER (Diocesan).	<i>a.</i> YORK AND RIPON (Diocesan).
<i>a.</i> CULHAM (Oxford Diocesan).	

*Training Schools for Mistresses only. (16—15 in England and Wales,  
1 in Scotland.)*

<i>a.</i> BISHOP STORTFORD (Rochester Diocesan).	<i>f.</i> LIVERPOOL ROMAN CATHOLIC.
<i>a.</i> BRIGHTON (Chichester Diocesan).	<i>a.</i> NORWICH (Diocesan).
<i>a.</i> BRISTOL GLOUCESTER, AND OXFORD (Diocesan).	<i>a.</i> RIPON (York and Ripon Diocesan).
<i>a.</i> DERBY (Lichfield Diocesan).	<i>a.</i> SALISBURY (Diocesan).
<i>a.</i> DURHAM (Diocesan).	<i>b.</i> STOCKWELL (British and Foreign School Society's).
<i>g.</i> EDINBURGH, Lochrin House (Scottish Episcopal).	<i>a.</i> TRURO (Exeter Diocesan).
<i>c.</i> GRAY'S INN ROAD (Home and Colonial School Society's).	<i>a.</i> WARRINGTON (Chester Diocesan).
<i>a.</i> LINCOLN (Diocesan).	<i>a.</i> WHITELANDS (National Society's).

*Training Schools for both Masters and Mistresses. (7—3 in England and Wales,  
4 in Scotland.)*

<i>a.</i> CHELTENHAM (Church of England).	<i>g.</i> GLASGOW (Free Church).
<i>g.</i> EDINBURGH, Castle Hill Terrace (Church of Scotland).	<i>c.</i> HOMERTON (Congregational).
<i>g.</i> EDINBURGH, Moray House (Free Church).	<i>d.</i> WESTMINSTER (Wesleyan).
<i>g.</i> GLASGOW, Dundas Vale (Church of Scotland).	

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*a.* Church of England (26); *b.* British and Foreign School Society (3); *c.* Congregational (1) Wesleyan (1); *e.* Home and Colonial School Society (1); *f.* Roman Catholic (2).  
Total for England, 33. *g.* Scotland (6).



10.—CAPITATION GRANTS FROM 1854 TO 30 JUNE, 1863.  
(ENGLAND AND WALES.)

SCHOOLS CONNECTED WITH	Amount of Grant.	Number of Scholars.		Percentage on Scholars on whom Grants were allowed to Number in Average Attendance.
		On whom Grants were allowed.	In Average Attendance.	
National Society or Church of England - - - - -	£ 353,588	1,404,665	3,464,896	40·54
British and Foreign School Society	64,229	266,339	609,369	43·7
Wesleyan Methodists' Conference	30,745	124,685	280,532	44·44
Roman Catholic Poor Law Com- mittee - - - - -	25,385	116,602	269,225	43·31
Total - - -	473,947	1,912,291	4,624,022	41·35

11.—NUMBER OF SCHOOLS, WITH THEIR ACCOMMODATION, AND THE NUMBER OF SCHOLARS IN AVERAGE ATTENDANCE THEREIN (ENGLAND AND WALES.)

Year.	SCHOOLS.			ACCOMMODATION.			AVERAGE ATTENDANCE.			AVERAGE ATTENDANCE.		
	Day and Evening.			Day and Evening.			Day Schools.			Evening Schools.		
	Annual Grant Schools.	Simple Inspection Schools.	Total.	Annual Grant Schools.	Simple Inspection Schools.	Total.	Annual Grant Schools.	Simple Inspection Schools.	Total.	Annual Grant Schools.	Simple Inspection Schools.	Total.
1850*	—	—	1,943	—	—	383,984	—	—	—	—	—	—
1851*	—	—	2,093	—	—	350,969	—	—	250,214	—	—	—
1852*	—	—	2,375	—	—	421,891	—	—	322,674	—	—	—
1853*†	—	—	2,384	—	—	402,449	—	—	284,853	—	—	—
1854*	—	—	3,147	—	—	481,274	—	—	393,555	—	—	—
1855*	—	—	3,853	—	—	704,495	—	—	447,008	—	—	—
1856*	—	—	4,237	—	—	766,152	—	—	479,728	—	—	—
1857*	3,577	861	4,438	769,838	71,377	841,215	488,831	42,379	531,210	—	—	—
1858*	4,108	1,327	5,435	874,887	126,210	1,001,097	560,898	74,750	635,648	—	—	—
1859*	4,496	1,035	5,531	970,350	84,540	1,054,890	631,353	43,249	674,602	—	—	—
1860*	5,141	871	6,012	1,094,006	64,821	1,158,827	712,193	39,132	751,325	—	—	—
1861*	5,538	721	6,259	1,182,019	33,763	1,215,782	753,444	20,387	773,831	—	—	—
1862*	5,604	509	6,113	1,221,039	81,521	1,292,560	780,690	18,366	799,056	14,782	12	14,794
1863	5,730	458	6,188	1,264,146	42,780	1,306,926	799,156	26,535	825,691	13,574	499	14,073
1864	5,891	537	6,428	1,269,755	53,153	1,322,908	796,661	32,285	828,946	25,981	23	26,004
1865	6,367	448	6,815	1,406,600	52,671	1,459,271	848,044	12,326	860,370	33,904	86	33,990
1866	6,694	387	7,081	1,465,203	33,418	1,498,621	863,420	7,889	871,309	40,141	—	40,141
1867	7,022	555	7,577	1,547,585	50,108	1,597,693	911,681	14,689	926,370	45,835	—	45,835
1868	7,406	587	7,993	1,663,043	47,480	1,710,523	978,521	16,087	994,608	55,154	158	55,312
1869	7,845	690	8,535	1,765,944	58,362	1,824,306	1,062,999	16,681	1,079,680	64,210	118	64,328
1870	8,281	638	8,919	1,878,584	53,982	1,932,566	1,152,389	16,592	1,168,981	73,645	7	73,652

\* During the years 1850-62 the Roman Catholic Schools of Scotland are included in the above Returns.  
† The Returns for 1853 are for 10 months only. Up to 1852 the School year ended on the 31st October; since that date all the Returns are for the year ending the 31st August.

12.—NUMBER OF SCHOOLS (i.e. INSTITUTIONS)—DAY AND EVENING—VISITED BY H.M. INSPECTORS IN ENGLAND AND WALES ;  
ARRANGED UNDER DENOMINATIONS.

YEAR.	Schools connected with the National Society or Church of England.			British, Wesleyan, and other schools not connected with the Church of England.			Roman Catholic Schools.			TOTAL.		
	On Account of Annual Grant.	For Simple Inspection only.	Total.	On Account of Annual Grant.	For Simple Inspection only.	Total.	On Account of Annual Grant.	For Simple Inspection only.	Total.	On Account of Annual Grant.	For Simple Inspection only.	Grand Total.
1860	—	—	1,562	—	—	282	—	—	99*	—	—	1,943*
1861	—	—	1,713	—	—	282	—	—	98*	—	—	2,093*
1862	—	—	1,984	—	—	292	—	—	99*	—	—	2,375*
1863	—	—	1,909	—	—	333	—	—	142*	—	—	2,384*
1864	—	—	2,541	—	—	403	—	—	203*	—	—	3,174*
1865	—	—	3,101	—	—	528	—	—	224*	—	—	3,853*
1866	—	—	3,455	—	—	540	—	—	242*	—	—	4,237*
1867	2,755	779	3,534	612	31	643	210	51	261*	3,577	861	4,438*
1868	2,235	1,213	4,448	647	52	699	226	62	288*	4,108	1,327	5,435*
1869	3,507	988	4,495	762	29	791	227	18	245*	4,496	1,035	5,531*
1860	4,084	814	4,898	832	38	870	225	19	244*	5,141	871	6,012*
1861	4,394	675	5,069	886	32	918	258	14	272*	5,538	721	6,259*
1862	4,415	489	4,904	915	8	923	274	12	286*	5,604	509	6,113*
1863	4,572	447	5,019	904	9	913	254	2	256	5,730	458	6,188
1864	4,663	485	5,148	1,013	47	1,060	215	5	220	5,891	537	6,428
1865	5,026	410	5,436	1,075	37	1,112	266	1	267	6,367	448	6,815
1866	5,493	359	5,852	1,131	27	1,158	270	1	271	6,694	387	7,081
1867	5,522	510	6,032	1,204	40	1,244	296	5	301	7,022	555	7,577
1868	5,781	535	6,316	1,313	46	1,359	312	6	318	7,406	587	7,993
1869	6,103	625	6,728	1,414	62	1,476	328	3	331	7,845	690	8,535
1870	6,382	572	6,954	1,549	62	1,611	350	4	354	8,281	638	8,919

\* Includes the Roman Catholic Schools in Scotland.



13.—NUMBER of CHILDREN present at examination in schools inspected in ENGLAND and WALES.

Year.	Day Schools.			Evening Schools.		
	Annual Grant Schools.	Simple Inspection Schools.	Total.	Annual Grant Schools.	Simple Inspection Schools.	Total.
1851*	—	—	236,656	—	—	—
1852*	—	—	308,782	—	—	—
1853*	—	—	305,213§	—	—	—
1854*	—	—	410,904	—	—	—
1855*	—	—	483,934	—	—	—
1856*	—	—	552,226	—	—	—
1857*	547,295	55,262	602,557	—	—	—
1858*	615,457	82,846	698,303	—	—	—
1859*	694,943	62,139	757,082	—	—	—
1860*	778,810	52,161	830,971	—	—	—
1861*	836,509	43,375	879,884	—	—	—
1862*	857,663	32,331	889,994	16,130	34	16,164
1863	884,096	27,191	911,287	13,731	484	14,215
1864	921,767	33,412	955,179	20,534	20	20,554
1865	1,007,605	35,161	1,042,766	29,798	83	29,881
1866	1,060,498	26,314	1,086,812	20,335	209	20,544
1867	1,124,606	33,650	1,158,256	45,794	33	45,827
1868	1,226,451	35,987	1,262,438	58,327	94	58,421
1869	1,328,863	40,644	1,369,507	68,516	63	68,579
1870	1,434,766	39,117	1,473,883	77,918	5	77,923

The numbers on the Registers would be greater than these, *e.g.*, in Annual Grant Day Schools there were 1,239,834 in 1865; 1,291,490 in 1866; 1,359,019 in 1867; 1,453,761 in 1868; 1,569,139 in 1869; and 1,693,059 in 1870.

\* During the years 1861-62 the children in the Roman Catholic Schools of Scotland are included in the above Returns.

§ Returns for 10 months only.

14.—COMPARATIVE AGE OF SCHOLARS in Schools inspected by Her Majesty's Inspectors of Schools in GREAT BRITAIN.

Year.	Percentage of Scholars aged												Total Percentage under Ten Years of Age.
	Under Four.	Between Four and Five.	Between Five and Six.	Between Six and Seven.	Between Seven and Eight.	Between Eight and Nine.	Between Nine and Ten.	Between Ten and Eleven.	Between Eleven and Twelve.	Between Twelve and Thirteen.	Between Thirteen and Fourteen.	Over Fourteen.	
1850*	-	-	-	-	-	14'13	13'62	12'54	10'0	6'84	4'24	3'55	62'83
1851*	-	-	-	-	-	14'94	14'09	12'73	9'36	7'19	4'12	3'35	63'25
1852*	-	-	-	-	-	14'73	13'98	12'56	10'31	7'85	4'61	3'96	60'71
1853*	-	-	-	-	14'19	14'65	13'72	11'81	9'02	6'24	3'44	1'86	67'63
1854*	-	-	-	-	13'67	13'84	13'62	11'34	8'72	5'86	3'28	2'04	68'76
1855	2'98	4'59	7'18	10'75	13'26	14'15	13'65	12'03	8'99	6'44	3'64	2'34	66'56
1856	6'08	7'15	9'33	11'4	12'76	11'94	11'74	10'47	7'93	5'77	3'29	2'14	70'4
1857	6'58	7'89	10'05	12'21	12'4	11'94	11'03	9'91	7'7	5'26	3'04	1'99	72'1
1858	5'45	7'22	9'3	11'84	12'7	12'26	11'56	10'2	7'98	5'8	3'4	2'29	70'33
1859	5'07	7'1	9'7	12'04	12'48	12'22	11'81	10'16	7'82	5'88	3'33	2'39	70'42
1860	5'36	7'26	9'75	11'6	12'48	12'26	11'91	10'05	7'99	5'7	3'29	2'35	70'62
1861	5'09	7'43	9'94	11'97	12'75	12'03	11'55	10'45	7'7	5'81	2'95	2'28	70'81
1862	5'47	7'38	9'66	11'7	12'92	11'68	11'26	9'75	8'37	6'17	3'22	2'42	70'07
1863	6'41	7'45	9'56	11'55	12'77	11'85	11'42	10'19	7'99	5'81	3'1	1'9	71'01
1864	6'11	7'38	9'8	10'86	12'84	11'87	11'57	10'31	8'11	5'97	3'25	1'93	70'43
1865	6'32	7'54	9'94	10'85	12'71	12'02	11'72	10'27	7'97	5'74	3'09	1'83	71'1
1866	6'53	7'75	10'19	11'1	12'5	11'88	11'67	10'19	7'96	5'54	2'92	1'77	71'62
1867	6'72	8'14	10'36	11'29	12'67	11'75	11'43	9'98	7'82	5'43	2'77	1'64	72'36
1868	6'51	8'34	10'62	11'28	12'23	11'97	11'33	9'91	7'85	5'52	2'81	1'63	72'28
1869	6'38	8'36	10'8	11'28	11'95	11'9	11'44	9'91	7'88	5'63	2'84	1'63	72'11
1870	6'25	8'29	10'76	11'48	12'0	11'83	11'34	10'06	7'85	5'6	2'88	1'66	71'95
Mean per-cent-age.	44'57					12'66	12'16	10'71	8'35	6'00	3'31	2'24	60'30

\* The returns for these years do not distinguish the ages of children under eight years.

15.—TABLE showing the Number of Certificated Teachers *actually employed in teaching*; Number of Assistant Teachers appointed under Minute of 23rd July, 1852; and Number of Pupil Teachers under Apprenticeship (England and Wales).

Year, ending 31st Dec.	CERTIFICATED.			ASSISTANT.			PUPIL TEACHERS.		
	Men.	Women.	Total.	Men.	Women.	Total.	Boys.	Girls.	Total.
	Examination for Certificate instituted by Regulations of 21st December, 1846.			Recognised by Minute of 23rd July, 1852.			Recognised by Minute of 25th August, 1846, and by the Regulations of the 21st De- cember, 1846.		
1847	120	4	124*	—	—	—	286	144	430
1848	501	93	594*	—	—	—	895	413	1,308
1849	703	227	930*	—	—	—	2,155	1,097	3,252
1850	818	275	1,093*	—	—	—	2,682	1,508	4,190
1851	996	401	1,397*	—	—	—	3,141	1,852	4,993
1852	1,352	627	1,979*	—	—	—	3,322	2,021	5,343
1853	1,205	681	1,886	58	28	86	3,427	2,414	5,841
1854	1,403	862	2,265	118	33	151	3,543	2,846	6,389
1855	1,726	1,044	2,770	143	48	191	3,839	3,278	7,127
1856	2,108	1,446	3,554	150	41	191	4,539	4,010	8,549
1857	2,499	1,719	4,218	147	45	192	5,433	4,936	10,369
1858	2,853	2,063	4,916	138	58	196	6,200	5,720	11,920
1859	3,279	2,439	5,718	173	78	251	6,652	6,300	12,952
1860	3,577	2,856	6,433	169	81	250	6,725	6,512	13,237
1861	3,979	3,317	7,296	232	110	342	6,805	7,159	13,964
1862	4,160	3,460	7,620	256	138	394	6,382	7,056	13,438
1863	4,642	3,786	8,428	240	164	404	5,489	6,399	11,888
1864	4,878	4,159	9,037	342	289	631	4,467	5,732	10,199
1865	5,121	4,465	9,586	447	390	837	4,005	5,351	9,356
1866	5,393	4,735	10,128	483	513	996	3,722	5,215	8,937
1867	5,598	5,065	10,663	490	646	1,136	3,988	5,500	9,488
1868	5,937	5,436	11,373	514	707	1,221	4,776	6,341	11,117
1869	6,251	5,776	12,027	492	744	1,236	5,569	7,273	12,842
1870	6,537	6,207	12,744	462	751	1,213	6,334	8,228	14,612

\* The years 1847-52 give the number of certificated teachers in Great Britain. In 1858, 2,297 teachers were engaged in schools under Government inspection in Great Britain, of which 1,886 (as shown above) were employed in England and Wales.



16.—AVERAGE SALARIES OF TEACHERS, CERTIFICATED AND  
UNCERTIFICATED, IN GREAT BRITAIN.

The Average Salary of Masters and Mistresses from all professional  
sources of income whatever (including Government Grants).

Year.	CERTIFICATED TEACHERS.			UNCERTIFICATED TEACHERS.			IMPLE INSPECTION SCHOOLS.		
	Masters.	Mistresses.		Masters.	Mistresses.		Masters.	Mistresses.	
		For Girls.	For Infants.		For Girls.	For Infants.		For Girls.	For Infants.
	£	£	£	£	£	£	£	£	£
1855	90	61	57	59	34	31	—	—	—
1856	89	60	54	61	37	33	—	—	—
1857	90	61	54	63	39	33	50	31	31
1858	92	61	57	62	38	34	51	32	30
1859	94	63	58	62	35	35	46	28	27
1860	94	62	58	60	36	34	47	28	27
1861	95	63	59	59	35	33	52	29	28
1862	95	63	60	62	38	34	51	28	26
1863	94	61	60	60	38	34	51	27	28
1864	90	58	55	62	38	33	47	30	34
1865	87	55	52	59	38	30	53	30	33
1866	87	55	53	55	36	33	54	32	31
1867	89	56	54	70	32	32	53	33	29
1868	91	56	55	72	39	30	54	39	29
1869	93	57	55	76	40	30	53	30	30
1870	96	58	56	75	37	30	54	32	32

17.—INCOME of SCHOOLS inspected for Annual Grants in ENGLAND and WALES.

Year.	Endowment.	Voluntary Subscriptions.	School Pence.	Other Sources.	Government Grants brought to account, which excludes all payments made direct to Teachers, &c.	Total.
	£	£	£	£	£	£
1851*	13,584	82,452	73,145	14,890	—	184,071
1852*	18,616	111,445	86,389	44,297	—	260,747
1853*	15,682	100,485	86,627	47,234	—	250,028§
1854*	23,487	133,386	116,102	63,277	—	336,252
1855*	29,316	164,675	142,441	49,229	—	385,661
1856*	31,297	174,347	151,121	54,928	—	411,693
1857*	25,072	174,362	161,787	49,899	—	411,120
1858*	31,788	192,608	184,337	55,684	—	464,417
1859*	32,410	208,214	213,885	59,755	—	514,264
1860*	37,820	241,473	250,886	63,912	—	594,091
1861*	38,084	250,295	271,731	78,655	—	638,765
1862*	38,111	252,900	281,336	91,052	67,386	730,785
1863	37,936	254,164	292,443	91,013	74,674	750,230
1864	33,716	277,760	318,386	93,504	105,744	829,110
1865	36,743	310,671	349,742	88,068	322,682	1,107,906
1866	36,372	319,240	368,969	95,191	361,640	1,181,412
1867	34,991	351,598	390,907	66,112	390,487	1,234,095
1868	43,352	387,590	420,742	41,796	414,925	1,308,405
1869	44,484	397,035	455,817	27,394	464,944	1,389,674
1870	47,558	418,839	502,023	28,951	528,040	1,525,411
Total for 20 years.	650,419	4,803,539	5,118,816	1,204,841	2,730,522	14,508,137

N.B. The income from a few schools is omitted, as sufficient returns were not furnished.

\* During the years 1851-62 the Roman Catholic Schools in Scotland are included in the above returns. During the years 1851-6 the returns from Simple Inspection schools are included.

§ The returns for 1858 are for 10 months only.

18.—RATE per SCHOLAR in AVERAGE ATTENDANCE in ANNUAL GRANT SCHOOLS in ENGLAND and WALES :—(1) Of Annual Grant Paid by Education Department; and (2) Of Total Cost of Yearly Maintenance.

YEAR.	ANNUAL GRANT.				COST OF YEARLY MAINTENANCE.			
	Schools connected with the National Society, or Church of England.	British, Wesleyan, and other Schools not connected with the Church of England.	Roman Catholic Schools.	All Schools.	Schools connected with the National Society, or Church of England.	British, Wesleyan, and other Schools not connected with the Church of England.	Roman Catholic Schools.	All Schools.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
1864	- 8 10½	- 9 3½	- 7 9½	- 8 10½	1 2 -½	1 1 4	- 16 1	1 1 7½*
1865	- 8 10	- 9 2½	- 8 8½	- 9 10½	1 6 10	1 7 2½	- 19 4½	1 6 5½
1866	- 8 11½	- 9 3½	- 8 8	- 9 -	1 7 8	1 8 -½	1 1 3½	1 7 4½
1867	- 8 11½	- 9 2	- 9 1½	- 9 1½	1 7 -½	1 6 11½	1 - 10	1 6 8½
1868	- 9 4	- 9 6½	- 9 5½	- 9 4½	1 6 -½	1 6 8½	- 19 9½	1 5 9½
1869	- 9 6	- 9 10	- 9 8	- 9 7	1 5 8	1 6 3½	- 19 8½	1 5 5
1870	- 9 7½	- 10 1½	- 9 11½	- 9 9	1 5 7½	1 6 1½	1 - 6	1 5 5

\* Before 1865 direct payments were made to teachers and pupil-teachers, and grants were given for books and maps, &c., and these sums did not appear in the balance-sheets of the schools. The figures relating to 1864 include only a small number of schools which received grants under the Revised Code, and the greater number of schools were still in receipt of direct grants, hence the figures are unreliable as a test of the cost of maintenance in that year. The sums received from local sources (i.e., from subscriptions, endowment, school-pence, &c.) towards the annual maintenance per scholar in schools in Great Britain is given as 18s. 1½d. in 1854, 18s. 11½d. in 1855, 18s. 11½d. in 1856, 17s. 8½d. in 1857, 18s. 9½d. in 1858, 18s. 6½d. in 1859, 18s. 8½d. in 1860, 19s. 4½d. in 1861, 19s. 7d. in 1862, and 19s. 10½d. in 1863. In order to find the average cost of maintenance in those years, there must be added to these sums the grants from the Education Department.

The following paragraphs from the Report of the Committee of Council on Education, for 1859-60, deal with the *Total* cost of a child's education :—

"The average annual expenditure per scholar from local or private sources for the last five years, was 18s. 7d."

"The sum total of the direct grant made for the maintenance of elementary day schools in 1859, gives rather more than 9s. 6½d. per head in Great Britain, and about 11s. 6d. per head in England and Wales (to which part of the United Kingdom the Capitation Grant is confined)."

"The direct annual cost, therefore, of educating a child in a school under the present system lies between 28s. and 30s. per annum. The indirect cost of inspection and of administration, which is wholly borne by Government, gives a further sum of 1s. 7d. per scholar; that of training teachers, 8s. 6½d. per scholar, of which Government provides 2s. 4½d.; and if 5 per cent. be charged on the capital sunk in land and buildings, a still further sum of 8s. 6½d. per scholar must be added, making a total of 40s. per scholar per annum, of which the State provides 17s."

M. E. SADLER.  
J. W. EDWARDS.



# **LIST of the most important PUBLICATIONS on Educational Subjects issued by the Chief Local Educational Authorities in England and Wales.**

[In the volume of Special Reports on Educational Subjects, 1896-7 (pp. 720-731), there is a list of the chief official publications on Education in Great Britain and Ireland, issued by the various Central Authorities. The following list contains the chief publications on Educational Subjects which have been issued by the Local Educational Authorities in England and Wales. It has been compiled for the most part from returns furnished by the Local Educational Authorities themselves. In the case of the School Boards returns were invited from those mentioned in Table J. in the Report of the Committee of Council on Education (England and Wales), 1896-97. From a few of the Local Authorities no returns were received, but the titles of those reports which had been previously supplied by them to the Library of the Education Department have been added to the list. The following Local Authorities are not included in the list, as they have supplied neither returns nor reports.

*County Councils*:—Soke of Peterborough.

*County Borough Councils*:—Bristol, Bury, Chester, and Dudley.

*School Boards*:—Derby and Sunderland.

*Welsh County Councils*:—Carmarthen, Carnarvon, Flint, and Pembroke.

*County Governing Bodies*:—Cardiff, Carmarthen, Flint and Pembroke.

The Reports, &c., marked with an asterisk may be consulted at the Education Department Library, St. Stephen's House, Cannon Row, Whitehall, S.W. In the case of annual and other periodical reports the asterisk means that some or all are in the Library. The publications which are marked O.P. are now out of print.]

Title of Report or Publication.	Where obtainable.	Price.
<b>I.—COUNTY COUNCILS.</b>		
<b>Bedfordshire:</b>		
*Report of the Technical Instruction Committee of the Bedfordshire County Council. (Annual.)	Technical Education Office, Shire Hall, Bedford.	
*Report of an Inquiry into Continental Methods of Education with special reference to— (a) Domestic Instruction for Girls; (b) Agriculture; (c) Industrial Arts, especially Plaiting. By Frank Spooner. 1893.	- - ditto.	
*Report of the Organising Secretary (F. Spooner) as to Farm Schools on the Continent. 1894.		
<b>Berkshire:</b>		
*Report of the Technical Education Committee. (Quarterly.)		
<b>Buckinghamshire:</b>		
*Report of the Organising Secretary of the Mid-Bucks Technical Education Divisional Committee. (Annual.)	Technical Education Office, 8, Church Street, Aylesbury.	Free.
*Report of the North-Bucks Divisional Committee. (Annual.) 1545.		M M

Title of Report or Publication.	Where obtainable.	Price.
<b>Cambridgeshire:</b>		
*Report of the Organising Secretary to the Technical Education Committee. (Annual.)	Austin Keen Esq., Technical Institute, Cambridge.	Free.
+Field Experiments in Cambridgeshire and neighbouring Counties on Barley, Roots, and Grass, during 1897.	- - ditto - -	6 <i>d.</i> Post free, 7 <i>d.</i>
*+Catalogue of Cambridgeshire Village Library.	- - ditto - -	6 <i>d.</i> Post free, 7 <i>d.</i>
*Regulations for Establishing and Conducting Schools and Classes and otherwise promoting Technical Instruction during the Session 1897-98.	- - ditto - -	2 <i>d.</i> Post free, 3 <i>d.</i>
<b>Cheshire:</b>		
*Report of the Organising Secretary on the work of the Technical Instruction Committee of the Cheshire County Council. (Annual.) 1892-97.	The Organising Secretary, Technical Instruction Committee, Crewe.	Post free, 1 <i>d.</i>
*Lectures delivered to Farmers and others, under the auspices of the Cheshire County Council, during the early portion of the year 1892.	- - ditto - -	- ditto.
*The Dairy Industry and Dairy Farming in Denmark. 1893.	Mr. W. Eardley, Publisher, Crewe.	2 <i>d.</i> Post free, 2½ <i>d.</i>
*Report on the Agricultural Instruction given at various Institutions in Denmark, Germany, and Switzerland. 1894.	- - ditto - -	Post free, ½ <i>d.</i>
*Poultry Keeping treated as a profitable Industry. 1894.	- - ditto - -	1 <i>d.</i> Post free, 1½ <i>d.</i>
<b>Cornwall:</b>		
*Report of the Technical Instruction Committee. (Annual.)		
*Report on Manurial Trials conducted in Cornwall, during the Sessions 1895-96, on Grass, Swedes, and Potatoes.		
<b>Cumberland:</b>		
*+Annual Report of the Technical Education Committee. 1891-2-1896-7 (Reports for 1891-2 and 1892-3 O.P.)	T. Brackenridge and Co., Whitehaven.	6 <i>d.</i> Post free, 8 <i>d.</i>
*Scheme for Provision of Technical Education (annually revised). 1892-3 O.P. 1893-4 and onwards.	County Offices, Carlisle.	3 <i>d.</i> Post free, 4 <i>d.</i>
Directory of Classes, &c., in the County. 1892-3 and onwards.	- - ditto.	
§Minutes of the Technical Education Committee from 1890 to 1897 (1890-1896 O.P.).—Annual Volumes of Minutes of County Council and all Committees.	T. Brackenridge and Co., Whitehaven.	
Quarterly Reports of the Organising Secretary. 1891-1897. (Not published separately, but included in the Minutes of the Technical Education Committee.)		

+ Can be consulted at the Technical Institute, Cambridge.

‡ Annual Reports, 1891-2 and 1892-3 can be consulted at the Organising Secretary's Office, The Courts, Carlisle.

§ Annual Volume for 1897 sent to Free Libraries in the County.

Title of Report or Publication.	Where obtainable.	Price.
<b>Derbyshire :</b>		
*Annual Report of the Technical Education Committee.		
*Directory of the Technical Education Committee. (Annual.)		
<b>Devonshire :</b>		
*Annual Report of the Technical Education Committee, 1893-4—1896-7. (The Report for 1893-4 contains a general view of the work of the Committee from its foundation.)	Not for sale.	
*Report on Evening Continuation Schools, 1893. (Reports for subsequent years embodied in Annual Reports.)	- ditto.	
*Report to the Committee (by the Organising Secretary) on the Condition of Education in the County, with Suggestions for a Scheme. 1892.	- ditto.	
Quarterly Report, December 1895 (containing Statistics as to Evening Continuation Schools, September 1892 to December 1895).	- ditto.	
*Report on the Summer Meeting for Teachers, held at Torquay in August 1893, 1895, 1897, in conjunction with the Somerset County Education Committee. (Report of the Meeting at Weston-super-Mare, 1894, issued by the Somerset County Education Committee.)	- ditto.	
<b>Dorsetshire :</b>		
*Annual Report of the Organising Secretary on the Work of the Technical Instruction Committee.	Spare copies are kept at the Committee's Office, Shire Hall Lane, Dorchester.	
*Quarterly Reports of the Technical Instruction Committee.	- ditto.	
<b>Durham :</b>		
*Report of the Education Secretary. (Annual.)	The Office of the County Education Committee, Old Elvet, Durham (City).	3d.
Directory of Technical and Manual Instruction.	- ditto - -	3d.
List of Registered Technical Teachers. (Annual.)	- ditto - -	6d.
Schemes of Organised and Continuous Courses of Study for Evening Students.	- ditto - -	3d.
<b>Essex :</b>		
*Technical Instruction Committee's Report and Handbook. (Annual.)	Technical Instruction Committee, County Offices, Chelmsford.	
*"The Journal" of the Essex Technical Laboratories. (Monthly.)	- ditto - -	3d.
1545.		Post free, 3½d.
		M M 2



Title of Report or Publication.	Where obtainable.	Price.
<b>Gloucestershire :</b>		
*Technical Instruction. Annual Reports of :—1. The Agricultural Committee; 2. The Domestic Economy Committee; 3. The Science and Art Committee. With Statistics, &c.		
<b>Hampshire</b> (Administrative County of Southampton) :		
*Report of the Technical Education Committee. (Quarterly.)		
*Directors' Report upon the relation of Secondary Schools to a County Scheme of Technical Education; and upon the Establishment of a County Scholarship Scheme. 1893.		
*Directory of Technical Education, showing the Provision made for supplying and aiding the supply of Technical and Manual Instruction. Revised 1897.		
<b>Herefordshire :</b>		
*Report of the Organising Secretary to the Technical Instruction Committee. (Quarterly.)		
*Technical Instruction Directory : showing how Technical Instruction is supplied and aided in the County of Hereford. Revised to July 31st, 1895.		
<b>Hertfordshire :</b>		
*Report of the Technical Instruction Committee, 1893-98. (Quarterly.)		
<b>Huntingdon :</b>		
Reports of District Committees on the Work of Technical Education.		
<b>Isle of Ely :</b>		
*Minutes of the Technical and Manual Instruction Committee. (Printed and circulated for the use of members of the Council only.)		
<b>Isle of Wight :</b>		
*Report of the Organising Secretary. (Annual.)	The Organising Secretary, 48, Quay Street, Newport, Isle of Wight.	
*Scheme of Technical Instruction for the Isle of Wight, 1897-98.		
<b>Kent :</b>		
*Quarterly Report of the Technical Instruction Committee, 1891-98.		
*Memorandum of the Provision made for Technical Instruction, with the Regulations and Conditions applicable thereto. (Annual.)		

Title of Report or Publication.	Where obtainable.	Price.
<b>Kent—continued.</b>		
*Report of the Finance Committee to the County Council of Kent upon the Technical Instruction Grant. 1891.		
*South Eastern Agricultural College, Wye, in connection with the Kent and Surrey County Councils. Report of Governors. (Annual.)		
*Report to the Governors of the South Eastern Agricultural College of Experiments in Permanent Pasture. By F. J. Lloyd.		
<b>Lancashire:</b>		
*Report of the Director of Technical Instruction (Annual). 1892-1897.	The Director of Technical Instruction, County Offices, Preston.	Free.
*Report on some Silk, Horological, and Mining Schools of France, Germany, and Switzerland. 1893.	- - ditto - -	Free.
*Report of the Director of Technical Instruction on the Plumbing Classes carried on during the Sessions 1894-95-1896-97.	- - ditto - -	Free.
Particulars respecting Grants-in-Aid to Urban and Rural Authorities.	- - ditto - -	Free.
*Report on Special Classes for Teachers and Advanced Students held in September 1896, at King's College, London, by the Worshipful Company of Plumbers and the Lancashire County Council.	- - ditto - -	Free.
<b>Leicestershire:</b>		
*Minutes of the Meetings of the County Council (containing Technical Instruction Committee's Reports) (issued quarterly).		
Annual Report of the Midland Dairy Institute. 1896 and 1897.	The Manager, Midland Dairy Institute, Kingston Fields, Derby; or, The Secretary, Education Office of the Leicestershire County Council, Alliance Chambers, Leicester.	
*Scheme of Technical and Manual Instruction, with Directions to Local Committees. (Annual.)		
<b>Lincolnshire (Parts of Holland):</b>		
No Publications.		
<b>Lincolnshire (Parts of Kesteven):</b>		
*Directory of Technical Instruction, with Organising Secretary's Report, and Suggestions for the Guidance of Local Committees. (Annual.)		
*Scholarship Examination 1897. Scheme for Scholarships, and Report of the Board of Examiners.		

Title of Report or Publication.	Where obtainable.	Price.
<b>Lincolnshire (Parts of Lindsey) :</b>		
*Report of the Educational Committee to the County Council of the Parts of Lindsey. (Annual.)	The Organising Secretary, Educational Committee of the County Council, Parts of Lindsey, Lincs.	Post free, 1 <i>d</i> .
*Directory (with Particulars as to the Distribution and Allotment of the Technical Instruction Funds). (Annual.)	- - ditto - -	Post free, 1 <i>d</i> .
†Minutes of the Proceedings of the Educational Committee.	Not for sale.	
<b>London :</b>		
*Report of the Technical Education Board. (Annual.) 1893-4—1896-7.	Edward Stanford, 26 and 27, Cockspur Street, Charing Cross, London, S.W.	1 <i>s</i> .
*The London Technical Education Gazette. (Monthly.) No. 1. Oct. 22, 1894.	- - ditto - -	2 <i>d</i> .
*Report to the Special Committee on Technical Education, being the result of an inquiry into the needs of London with regard to Technical Education, the existing provision for such education, and the best means to be taken by the London County Council for improving that provision under the Technical Instruction Acts, 1889 and 1891, and the Local Taxation (Customs and Excise) Act, 1890. By H. Llewellyn Smith, M.A., Secretary of the Committee. 1892.	Steel & Jones, 4, Spring Gardens, London, S.W.	5 <i>s</i> .
<b>Middlesex :</b>		
*Annual Report of the Technical Instruction Committee. Report as to Pupil Teachers' Schools and Scholarships. 1898.		
<b>Norfolk :</b>		
*Quarterly Report of the Technical Education Committee. July, 1891—April, 1898.	The Organising Secretary, Technical Education Committee, Shire Hall, Norwich.	
*Directory. 1892—1897.	- - ditto - -	6 <i>d</i> .
*Special Report of the Technical Education Committee. Oct., 1896.		Post free, 7½ <i>d</i> .
*The Norfolk and Norwich School of Cookery and Technical College for Women and Girls. Report by Mrs. E. Pillow. 1895.		
*Domestic Economy in Rural Districts. Report by Mrs. E. Pillow. 1896.		
*Report of Conference on Secondary and Technical Education. Sept., 1896.		

† Can be consulted at the Office of the Educational Committee, Lincoln.



Title of Report or Publication.	Where obtainable.	Price.
<b>Northamptonshire :</b>		
*Report of the County Educational Committee. (Annual.) 1894-1897.	- Not for sale.	
*Report on Scholarships tenable at Secondary Schools. 1895.	- ditto.	
*Directory of Technical Instruction, showing the Provision made for supplying and aiding the supply of Technical and Manual Instruction. Revised. 1896.		
<b>Northumberland :</b>		
*Annual Report of the Technical Education Committee. 1891-2—1896-7. (Reports for 1891-2 and 1892-3 O.P.)	Moot Hall, Newcastle-on-Tyne. (So far as copies can be spared.)	Free.
*Report of the Technical Education Committee on Manurial Trials. (Annual.) 1892-1896. (Reports for 1892 and 1893 O.P.)	- - ditto - -	Free.
*Agricultural School and Demonstration Farm. Report for the year ending March 31, 1897.	- - ditto - -	Free.
*Northern Counties School of Cookery and Household Economy Report. (Annual.) 1893-4—1896-7. (Report for 1893-4 O.P.)	- - ditto - -	Free.
*Directory of Technical Instruction. 1892-3, 1893-4-5, 1895-6-7. (Directory for 1892-3 O.P.)	- - ditto - -	Free.
*Technical Education. Conference of Local Secretaries and Chairmen of Local Committees, and Address by Major General Sir John Donnelly, K.C.B., at Rothbury, 4th July 1894.		
<b>Nottinghamshire :</b>		
*Annual Report of the Technical Instruction Committee. 1891-2—1896-7.		
*Annual Reports of the Midland Dairy Institute and of the Agricultural Department, University College, Nottingham. 1895-6, 1896-7.		
*Report of Experiments on Agriculture conducted in 1894.		
*Scheme of Technical Instruction. (Annual.)		
*County Scholarship Scheme. (Annual.)		

Title of Report or Publication.	Where obtainable.	Price.
<b>Oxfordshire:</b>		
*+Annual Report of the Technical Instruction Committee. O.P.	Messrs. G. Bryan & Co., St. Michael's Chambers, Ship Street, Oxford.	Free.
*+Technical Instruction Directory	ditto	6d. post free 8d.
*Report to the Technical Instruction Committee on the needs of the County with respect to Technical and Manual Instruction. By H. Llewellyn Smith (Organising Secretary for Technical Instruction) in conjunction with F. Pullinger and P. Chalmers Mitchell. 1891.		
<b>Rutlandshire:</b>		
*Report of the Technical Instruction Committee to the County Council. (Quarterly.)		
<b>Salop:</b>		
‡Report of the Organising Secretary	Not for sale.	
*+Quarterly Report of the Technical Instruction Committee to the County Council.	ditto.	
*+Report on Technical Instruction in Shropshire. (Science and Art.) By C. Callaway, D.Sc. 1891.	ditto.	
*+Report on Technical Instruction in Shropshire. (Agriculture.) By F. R. Armytage. 1891.	ditto.	
*+Report on Manurial Experiments in Shropshire. 1883 and 1894.	ditto.	
*Rules affecting Technical Instruction Classes, Scholarships, &c.		
*Regulations as to County Council Scholarships.		
<b>Somersetshire:</b>		
*Report of the Somerset County Education Committee. (Annual.) 1891-1897.		
*Scheme for Evening Continuation Schools. (Annual.)		
*Report of the Director of Technical Instruction on Visits to the Cheshire Dairy Institute at Worleston, and the South Eastern Agricultural College at Wye. 1894.		
*Report on the Summer Meeting for Teachers, held at Weston-super-Mare, in August 1894, in conjunction with the Devon County Education Committee. (Reports of the Meetings at Torquay, 1893, 1895, 1897, issued by the Devon County Council.)		

† Can be consulted at the office of the Organising Secretary, 8, New Road Oxford. The Organising Secretary has a few spare copies of both Annual Report and Directory should the publisher not be able to supply them.

‡ Can be consulted at the office of the Organising Secretary, Shire Hall, Shrewsbury.

Title of Report or Publication.	Where obtainable.	Price.
<b>Staffordshire :</b>		
*Directory and Annual Report of the Technical Instruction Committee.	County Technical Offices, Stafford.	Post free, 6d.
*Quarterly Report of the Technical Instruction Committee to the County Council.	- - ditto.	
<b>Suffolk (East) :</b>		
*Reports of Field Experiments at Bramford, 1893, 1894, 1895, 1896, 1897. (Report for 1896 O.P.)	W. E. Watkins Esq. 26, Butter Market, Ipswich.	Post free, 1d
*Report of Conference on Technical Instruction, held at Ipswich. 1897.	- - ditto - -	Post free, 1d.
*Lectures to Shepherds. Stowmarket. 1896.	- - ditto - -	Post free, 1d.
*Lectures to Shepherds. Tattingstone. 1896.	- - ditto - -	Post free, 1d.
*Technical Instruction Committee. Rules and Memoranda. (Annual.)	- - ditto - -	Post free, 1d.
<b>Suffolk (West) :</b>		
Minutes of Proceedings of the West Suffolk County Council.		
*Report of the Agricultural Experiments on the Plots at Higham and Lavenham. (Annual.)		
*Lecture by Mr. Henry Robinson, showing the Objects aimed at in the Agricultural Experiments on the Plots at Higham and Lavenham. 1894.		
<b>Surrey :</b>		
†Reports of the Surrey County Council Technical Instruction Committee. No. 1, April 1891 to No. 29, February 1898. (Quarterly.)	Not for sale.	
*†Memoranda to the Committee by the Organising Secretary :—	- ditto.	
(1) Registration of Teachers. 1892.		
(2) Proprietary Schools in relation to Technical and Secondary Education. 1892.		
(3) Some Reasons for the Rejection of "A Bill to amend the Local Taxation (Customs and Excise) Act, 1890, with respect to Contributions for Technical Instruction." 1892.		
(4) Richmond Charities Enquiry. 1893.		
(5) Report of the Royal Commission on Secondary Education. 1895.		
(6) The Education Bill. 1896.		

† Can be consulted at the County Hall, Kingston-on-Thames,



Title of Report or Publication.	Where obtainable.	Price.
<b>Surrey—continued.</b>		
†Other Memoranda to the Committee:—	Not for sale.	
(1) The Assistant Commissioner's Report on Surrey. By E. J. Halsey (Chairman of the Committee).		
* (2) Technical and Secondary Education for Girls. By Miss Hadland. 1893.		
* (3) Experiments with Potatoes. By J. Wright. 1895.		
South Eastern Agricultural College at Wye, in connection with the Kent and Surrey County Councils. Report of Governors. <i>See Kent.</i>		
<b>Sussex (East):</b>		
*Minutes of Proceedings of the Technical Instruction Committee.		
<b>Sussex (West):</b>		
*Minutes of Proceedings of the Technical Instruction Committee.		
<b>Warwickshire:</b>		
*Report of the Technical Education Committee. (Quarterly.)	Organising Secretary, Education Office, High Street, Warwick.	Post free, 1 <i>d.</i>
*Directory of Technical Education. (Annual.)	- ditto -	6 <i>d.</i> Post free, 7½ <i>d.</i>
*Report of Enquiry respecting the Provision for Technical Education in Agriculture by the County Councils. 1893.		
<b>Westmorland:</b>		
Organising Secretary's Report. (Annual.)	James Bateman Esq. Kent Street, Kendal.	Free.
*Scheme of Technical Instruction. (Annual.)		
*Report of the Organising Secretary on the Experimental Plots. 1896.		

† Can be consulted at the County Hall, Kingston-on-Thames.

Title of Report or Publication.	Where obtainable.	Price.
<b>Wiltshire :</b>		
* † Annual Report of the Technical Education Committee. 1891-2—1896-7.	Not for sale.	
* † Annual Report of the Agricultural Committee. 1895-6, 1896-7.	- ditto.	
* † Annual Report of the Wiltshire School of Cookery and Domestic Economy. 1891-2—1896-7.	- ditto.	
* † Experiments in Potato and Onion Culture in the Warminster District. 1892, 1893, 1894, 1895. Calne and Warminster, 1896 ; and Calne, 1897.	Eyre and Spottiswoode, London.	1s. Post free, 1s. 1½d.
* † Technical Education Committee's Directory, 1893-4, 1894-5.	Not for sale.	
* † Technical Education and Agricultural Committee's Directory. 1895-6 and 1897-8.	- ditto.	
* † Report by Professor Lloyd on County Cheddar Cheese School. 1895. (Contained in Annual Report of Dairy Schools Committee.)	- ditto.	
† Report by Instructresses on County Cheddar Cheese School. 1896.	- ditto.	
* † Report on Pig Feeding Demonstrations. 1897.	- ditto.	
<b>Worcestershire :</b>		
* Report of the Technical Instruction Committee to the County Council. (Quarterly.)		
<b>Yorkshire (East Riding) :</b>		
* Minutes of the Technical Instruction Committee, 1890-1898.		
<b>Yorkshire (North Riding) :</b>		
* Annual Report of the Technical Instruction Committee. (First to Sixth.)	Not for sale.	
* Year-Book, showing the Provision made for aiding Technical and Manual Instruction in the North Riding.	- ditto.	
* Report by Mr. John Newton on the Dairy Industry in Denmark and Sweden. 1897.	- ditto.	

† Can be consulted at the Technical Education Department, County Offices, Trowbridge.

Title of Report or Publication.	Where obtainable.	Price
<p><b>Yorkshire (West Riding):</b></p> <p>*Annual Report of the West Riding Technical Instruction Committee. (First Report, 1892, to Sixth Report, 1898.)</p> <p>*Technical Instruction Handbook and Directory. (Annual.)</p> <p>*Mr. Graham's Report on the Holiday Courses at Caen, and on the Commercial Schools in Paris, Rouen, and Bordeaux. 1896.</p> <p>*Scheme and Syllabuses for Instruction and Examination in Commercial Subjects and Foreign Languages. Revised to July, 1897.</p> <p>*Organisation and Conduct of Classes for Domestic Subjects. Revised to September, 1897.</p> <p>*Technical Instruction in Agriculture. Revised to April, 1897.</p> <p>*Technical Instruction in Evening Continuation Schools. Explanatory Notes. Prepared by direction of the West Riding Technical Instruction Committee, with a view to assist in the formation and carrying on of Evening Continuation Schools in the West Riding.</p> <p>*Technical Instruction in Evening Continuation Schools. Revised to April, 1897.</p> <p>*Training Classes for Teachers and Registration of Teachers of Evening Classes. School Years 1895-6 and 1897-8.</p> <p>*Scheme for Scholarships, Free Studentships, and Exhibitions offered for the School Year 1898-9.</p>		
<p><b>II.—COUNTY BOROUGH COUNCILS.</b></p>		
<p><b>Barrow-in-Furness:</b></p> <p>†Report of the Technical Instruction Committee. (Annual.)</p> <p>*Reports of the Barrow School of Science and Art and Higher Grade School Technical Classes. (Annual.)</p>		
<p><b>Bath:</b></p> <p>*Annual Report of the Bath Technical Education Committee. (1892-93—1894-95.)</p>		
<p><b>Birkenhead:</b></p> <p>*Report of the Science and Art Committee to the Town Council on the Work of the Municipal Schools of Science and Art. (Annual.)</p>	<p>A. G. Crosby Esq., Laird School of Science and Art Birkenhead.</p>	<p>Free.</p>

† Can be consulted at the Town Clerk's Office, Barrow-in-Furness.



Title of Report or Publication.	Where obtainable.	Price.
<b>Birmingham :</b>		
*Annual Report of the Technical School Committee.	Municipal Technical School, Suffolk St., Birmingham.	
*Municipal Technical School Annual Programme.	- - ditto - -	2d. Post free, 3½d.
*Address by Sir Henry E. Roscoe, M.P., on "The Value of Technical Education. 1892.	- - ditto.	
*Address by the Right Hon. Arthur H. D. Acland, M.P. 1893.	- - ditto.	
*Address by Sir Bernhard Samuelson, Bart., M.P. 1894.	- - ditto.	
*Address by His Grace the Duke of Devonshire, K.G., at the Inauguration of the Municipal Technical School. 1895.	- - ditto.	
*Address by the Right Hon. A. J. Mundella, M.P. 1896.	- - ditto.	
<b>Blackburn :</b>		
*Blackburn Municipal Technical School. Students' Handbook, Ninth Session. 1897-8.		
<b>Bolton :</b>		
Technical Instruction Committee's Report. (Annual.)	F. Wilkinson Esq., Technical School, Bolton.	Post free, 1½d.
<b>Bootle :</b>		
*Report of the Technical Instruction Committee to the Town Council on the Work in the Technical School. (Annual.)	The Town Clerk, Bootle.	
*Report of the Free Library and Museums Committee. May 13, 1891.	- - ditto.	
*The Technical School, Free Library and Museum, Oriel Road. Prospectus of Educational Classes. (Annual.)	- - ditto.	
<b>Bradford :</b>		
*Bradford Technical College Annual Report and Statement of Accounts.		
<b>Brighton :</b>		
*Municipal School of Science and Technology. Prospectuses of Day and Evening Classes.	Not for sale.	
*Municipal School of Art. Prospectus and Programme.	- ditto.	
*Address to Prize Winners of Municipal Schools of Science and Technology, and Art. By Sir Joseph Fayrer, Bart., April 14, 1898.	- ditto.	

Title of Report or Publication.	Where obtainable.	Price.
<p><b>Burnley :</b></p> <p>*Annual Report of the Burnley Mechanics' Institute and Science, Art and Technical School.</p> <p>*Burnley Mechanics' Institution. Classes Syllabus. 1896-7.</p> <p>*Regulations for the award of Burnley Corporation Scholarships, tenable at the Burnley Mechanics' Institution and Technical School. 1897.</p>		
<p><b>Canterbury :</b></p> <p>No publications.</p>		
<p><b>Coventry :</b></p> <p>*Report of the Coventry Technical Instruction Committee. (Annual.)</p> <p>*Coventry Technical Institute. Address delivered by W. E. Ayrton, F.R.S., February 4, 1898.</p>		
<p><b>Croydon :</b></p> <p>*Annual Report of the Polytechnic Committee. 1893-1897.</p>		
<p><b>Derby :</b></p> <p>No publications.</p>		
<p><b>Devonport :</b></p> <p>No publications.</p>		
<p><b>Exeter :</b></p> <p>*Exeter Technical and University Extension College—</p> <p>Technical Department, Annual Report ;</p> <p>University Extension Department, Annual Report ;</p> <p>Time Table and List of Classes.</p>	<p>The Secretaries, Technical and University Extension College, Exeter.</p>	<p>Free on receipt of stamped wrappers.</p>
<p><b>Gateshead :</b></p> <p>No Publications.</p>		
<p><b>Gloucester :</b></p> <p>No Publications.</p>		
<p><b>Great Yarmouth :</b></p> <p>*Prospectus of the Corporation School of Science and Art for the Session 1897-8.</p>		

Title of Report or Publication.	Where obtainable.	Price.
<p><b>Grimsby:</b> Report of the Technical Instruction Committee. (Annual.)</p> <p><b>Halifax:</b> No Publications.</p> <p><b>Hanley:</b> No Publications.</p> <p><b>Hastings:</b> No Publications.</p> <p><b>Huddersfield:</b> *Returns of Institutions receiving grants from the Town Council out of Local Taxation (Customs and Excise) Duties. (Annual.) *Report of the Sub-Committee appointed by the General Purposes Committee as to the distribution of the Local Taxation (Customs and Excise) duties received in respect of the year ended 31st March 1891.</p> <p><b>Hull:</b> †Report of the Technical Instruction Committee. (Annual.) *Hull Municipal Technical School. Prospectus. (Annual.)</p> <p><b>Ipswich:</b> *Science, Art, and Technical Schools. Prospectus of Classes. 1895-96.</p> <p><b>Leeds:</b> No Publications.</p> <p><b>Leicester:</b> *Annual Report of the Free Public Libraries Committee to the Town Council. *Leicester Technical School. Prospectus of the Classes for the Session 1893-4.</p> <p><b>Lincoln:</b> No Publications.</p>		

† Can be consulted at the Town Hall, Hull.



Title of Report or Publication.	Where obtainable.	Price.
<p><b>Liverpool:</b></p> <p>*Report of the Technical Instruction Sub-Committee of the Library, Museum and Arts and Technical Instruction Committee. (Annual.) 1892-1896.</p> <p>*Report of the Nautical Instruction Sub-Committee of the Library, Museum, and Arts and Technical Instruction Committee. (Annual to 1896. Report for 1897 included in Report of Technical Instruction Committee.)</p> <p>*Report of the Technical Instruction Committee. (Annual.) 1897.</p>		
<p><b>Manchester:</b></p> <p>*Annual Report of the Technical Instruction Committee. 1890-1897.</p> <p>*Report of Deputation appointed to visit Educational Institutions and Schools on the Continent. October 1891.</p> <p>*Report of the Deputation appointed to visit Technical Schools, Institutions and Museums in Germany and Austria. July and August, 1897.</p> <p>*Address by Walter Crane on the Study and Practice of Art. 1893.</p> <p>*Suggestions for the Municipal School of Art, Manchester. By Walter Crane. 1893.</p> <p>*Memoranda of Arrangements :</p> <p>(a) Between the Manchester School Board and the Municipal Technical School,</p> <p>(b) Between the Owens College and the Municipal Technical School, with regard to Technical Instruction, &amp;c. 1896.</p> <p>*Municipal Technical School and Municipal School of Art. Syllabus. (Annual.)</p>	<p>J. E. Cornish, 16, St. Ann's Square, Manchester.</p>	<p>6d.</p>
<p><b>Middlesbrough:</b></p> <p>+Middlesbrough High School, Report of the Trustees. (Annual.)</p>	<p>Not published.</p>	

† Can be consulted at the High School, Middlesbrough.

Title of Report or Publication.	Where obtainable.	Price.
<p><b>Newcastle-upon-Tyne :</b></p> <p>*Report by Sir Joshua Fitch, LL.D., upon the Technical Education given in the City, and upon the Manner in which the Grant under the Local Taxation (Customs and Excise) Act, 1890, may be most advantageously applied in the promotion of Technical Instruction. 1897.</p>		
<p><b>Northampton :</b></p> <p>Northampton and County Modern and Technical School. Headmaster's Report.</p>	Northampton and County Modern and Technical School, Northampton.	2d. Post free 3d.
<p><b>Norwich :</b></p> <p>No Publications.</p>		
<p><b>Nottingham :</b></p> <p>*†Annual Report of the University College, Free Public Libraries, and Natural History Museum Committees.</p> <p>*University College, Nottingham, Calendar. (Annual.) 1881—1897—8.</p>	John Sands, Peter Gate, Nottingham.	1s. Post free 1s. 4d.
<p><b>Oldham :</b></p> <p>*Annual Report of the Municipal Technical Schools. 1893—1897.</p>		
<p><b>Oxford :</b></p> <p>Reports of the "Oxford School of Science and Art." (Previous to 1891.) O.P.</p> <p>*Report of the Oxford City Technical School. (Annual since 1891.)</p> <p>*Prospectus of the Oxford City Technical School. (Annual since 1891.)</p>	The Secretary, City Technical School, Oxford. - - ditto - -	Post free ½d. Post free ½d.
<p><b>Preston :</b></p> <p>No Publications.</p>		
<p><b>Plymouth :</b></p> <p>*Report of the Technical Instruction Committee. (Annual.)</p>		
<p><b>Portsmouth :</b></p> <p>*Report of the Libraries, Museum, and Technical Education Committee, O.P. First Report. 1891—1895. Second Report. 1895—6.</p>		

† Can be consulted at the Nottingham Free Library and at the Secretary's Office, University College, Nottingham.  
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Title of Report or Publication.	Where obtainable.	Price.
<b>Reading :</b>		
Reports and Statements drawn up in view of a proposed Official Inquiry by the Charity Commissioners under the Endowed Schools Acts into the State and Circumstances of the various Endowed Schools and Public Charitable Foundations in Reading :		
(a) Report to a Joint Meeting of a Committee of the whole Council and the Trustees of Reading School. By Henry Day, Town Clerk. 1889.		
(b) Statement with reference to the Kendrick Schools, a second grade school for boys and girls. By Ernest Francis, Clerk to the Governors.		
Report as to the Working of the Free Public Library and Museum. First Report, 1885-1889 ; Second Report, 1889-1898.		
<b>Rochdale :</b>		
*Rochdale Municipal Technical School Annual Report. 1888-1897.		
*Rochdale Municipal Technical School Prospectus. (Annual.)		
<b>St. Helen's :</b>		
*Annual Report of the Director of Technical Education to the Technical Education Committee. 1892-3-1896-7.		
<b>Salford :</b>		
†Calendar of the Salford Royal Technical Institute.	W. F. Jackson & Co., Salford.	
1896-7 . . . . .	. . . . .	3d. ; post free
1897-8 . . . . .	. . . . .	5d.
		4d. ; post free
		6d.
†Annual Report of the Salford Royal Technical Institute.	Royal Technical Institute, Salford.	
<b>Sheffield :</b>		
No publications.		

† Can be consulted at the Municipal Technical School, The Gamble Institute, St. Helen's.

‡ Can be consulted at the Royal Technical Institute, Salford.



Title of Report or Publication.	Where obtainable.	Price.
<b>Southampton :</b>		
*Report by the Council of the Hartley Institution to the Council of the County Borough of Southampton. (Annual.)		
*Report by the Council of the Hartley Institution to the Technical Instruction Committee on Technical Classes. (Annual.)		
*The Present Position and Aims of the Hartley Institution. 1896.		
<b>South Shields :</b>		
Scheme adopted by the Technical Instruction Committee for awarding Capitation Grants to Local Committees.		
<b>Stockport :</b>		
*Report of the Stockport Technical School. (Annual.)		
Syllabus of the Stockport Technical School. (Annual.)		
<b>Sunderland :</b>		
No publications.		
<b>Walsall :</b>		
*Report of the Walsall Science and Art Institute. (Annual.)	Charles Camwell Esq., Secretary, Science and Art Institute, Walsall.	Free.
<b>West Bromwich :</b>		
*Syllabus of Classes held at the Institute for the Session 1896-7.		
<b>West Ham :</b>		
*West Ham Public Libraries Report. (Annual.)		
<b>Wigan :</b>		
No publications.		
<b>Wolverhampton :</b>		
*Report of the Free Library Committee. (Annual.)		
<b>Worcester :</b>		
*Victoria Institute. Worcester Municipal Science, Art, and Technical Schools. Syllabus of Classes (Annual issue since establishment in 1889).	T. Duckworth Esq., Secretary, Victoria Institute, Worcester.	2d.
<b>York :</b>		
No separate publications on educational subjects. 1545.		N N 2

Title of Report or Publication.	Where obtainable.	Price.
<p align="center"><b>III.—SCHOOL BOARDS.</b></p> <p><b>Birkenhead :</b></p> <p>*Minutes of Proceedings of the Board, 1893-6, including in an appendix—  Regulations and Syllabus for Governing the Religious Instruction and Observances in the Board Schools ;  Report as to the work of the Board during the three years ended May 10, 1896.</p> <p>*Official Manual. 1897-8.</p> <p><b>Birmingham :</b></p> <p>*Report showing the work accomplished by the Board. (Annual.) 1892-1897.</p> <p>*Annual Address by the Chairman. 1892-1896 :—  Mr. George Dixon. 1892-95.  Rev. E. F. M. MacCarthy. 1896-97.</p> <p>*Report on the Question of Over-Pressure. By Rev. Dr. Crosskey. 1884.</p> <p>*Report on Schools in Germany and Switzerland. By George B. Davis (late Clerk of the Birmingham School Board). 1879. O.P.</p> <p><b>Blackburn :</b></p> <p>Triennial Report of the Blackburn School Board. 1892-4 and 1895-7.</p> <p>Scripture Lessons, Hymns, &amp;c., selected for use in the Blackburn School Board Schools.</p> <p><b>Bolton :</b></p> <p>*Year Book of Information for the Members of the Board, School Managers, Teachers, &amp;c. 1898.</p> <p>*Addresses by the Chairman, the Rev. J. W. Cundey :—  On the Educational Work of the Board during the three years 1891-1894. Oct. 1894.  On the Educational Work of the Board during the three years 1894-1897. Oct. 1897.</p> <p>*Prospectus of Evening Schools, including Elementary Continuation Schools, Commercial Classes and Science and Art Classes. Session. 1897-8.</p>		
	<p>Birmingham School Board.</p> <p>- - ditto.</p> <p>- - ditto.</p> <p>- - ditto.</p>	
	<p>School Board Offices, Blackburn.</p> <p>- - ditto - -</p>	<p align="right"><b>3d.</b>  Post free, <b>3½d.</b></p> <p align="right"><b>3d.</b>  Post free, <b>4d.</b></p>

Title of Report or Publication.	Where obtainable.	Price.
<b>Bradford :</b>		
*Report of Proceedings of the School Board for the City of Bradford. (Triennial.) 1883-5—1894-7.		
*Year Book. 1894-1897.		
*Report of the Committee appointed by the Board to inquire into the Working and Cost of the Board's Central Classes, and of the Half-time plan of employing Pupil-Teachers. 1890-91.		
*Return relating to Higher Grade Board Schools, with special reference to the payment of a fee. 1894.		
*Report on Evening Continuation Schools and Classes. (Annual.) 1894-5—1896-7.		
*Regulations for the Management of Evening Schools and Classes.		
*Prospectus of Evening Continuation Schools and Classes.		
*Regulations for the Management of Day Schools.		
<b>Brighton and Preston. U.D. :</b>		
†Review of the Work accomplished by the Board during the three years ending October 1896.		
*†Report of the School Management Committee. (Annual.)		
<b>Bristol :</b>		
*Triennial Report. Seventh 1889-91 (containing Review of the Work of the Board since 1871). Eighth, 1892-94. Ninth, 1895-97.	School Board Offices, Bristol.	
*Guide to the Scholarships of Bristol.	- - ditto - -	2d.
*Year-Book. 1897.	- - ditto.	Post free, 2½d.
*Evening Schools Directory. 1897-98.	- - ditto.	
<b>Cardiff :</b>		
*Triennial Report of the Cardiff School Board.		
*Annual Report of the Board Schools.		
<b>Hull :</b>		
*Triennial Report of the Kingston-upon-Hull School Board. 1871-74—1895-98.		
*Statistical Report as to the School Accommodation in Hull. 1871.		

\* Can be consulted at the School Board Offices, 54, Old Steine, Brighton.



Title of Report or Publication.	Where obtainable.	Price.
<b>Leeds :</b>		
*† Triennial Report of the Work of the Board.		
*† Annual Report of the Board's Chief Inspector of Schools.		
*† Schemes of Instruction in Special Subjects.		
*† Prospectus of Higher Grade Schools.		
*† Prospectus of Evening Continuation Schools and Classes.		
† Annual Report on the Board's Schools for Blind and Deaf Children.		
Teacher's Syllabus of Work for Infants' Classes and Standards. By S. B. Tait, Board's Chief Inspector of Schools.	E. J. Arnold and Son, Leeds.	6d. each. Post free, 7d.
*Scheme of Religious Instruction for the Leeds Board Schools, being Resolutions adopted by the Board up to February 1888. 1893.		
<b>Leicester :</b>		
*Triennial Report of the Chairman. 1891, 1894.	School Board Offices, Leicester.	
*Statistical Returns. 1895-6, 1896-7.	- - ditto.	
*Annual Report on the Board's Desford Industrial School. 1895, 1896.	- - ditto.	
<b>Liverpool :</b>		
*Report of the Work of the Liverpool School Board. (Triennial.) 1870-73—1894-97.		
*Proceedings of the Liverpool School Board. 1896-7.		
*Suggestions to the Managers of their Public Elementry Schools by the Liverpool School Board. 1879.		
*General Rules for the Government of the Board Schools. 1888. (Under revision.)		
*The Board's Scheme of Education.		
*Memorandum as to the Emigration of Children. (As adopted Feb. 5, 1885, and amended Feb. 2, 1888.)		
*Memorandum showing the Duties and Powers of the District Education (Court of Appeal, etc.) Sub-Committee. (Adopted Jan. 2, 1890.)		
*Memorandum on the Subject of Superannuation. 1890.		
*Regulations for Governing the Establishment and Conduct of Evening Continuation Schools. 1897.		
*General Rules for the Government of the Truants' School. 1883.		

† Can be consulted at the School Board Offices, Leeds.

Title of Report or Publication.	Where obtainable.	Price.
<b>Liverpool—continued.</b>		
*Rules and Regulations for the Management of the South Corporation Certified Day Industrial School. (Established 1891.)		
*Code of Instructions for Pupil Teachers. 1895.		
*Syllabus of Preliminary Examination for Candidates for the Office of Pupil Teacher.		
*Scale of Salaries for Pupil Teachers, Candidate Pupil Teachers, and Candidates.		
*List of Books for Pupil Teachers' Reference Libraries.		
*Cookery Regulations and Course of Instruction in Cookery.		
*Manual Instruction: Syllabus of Metal Work Exercises. (First Year's Course.)		
*Manual Instruction: Syllabus of Wood-working Exercises, Standard V., VI., and VII. Courses.		
*Monthly Returns of Attendance at all Elementary Schools during the three years ended Aug. 31, 1897.		
<b>London:</b>		
*Minutes of Proceedings. 1870-1897.	Not for sale.	
*Report of the School Board for London. (Annual.) 1886-7 to 1896-7.	School Board Offices, Victoria Embankment, London, W.C.	6d.
*Report of the School Management Committee. 1874-1897.	- ditto -	(Report, 2s. 6d. With Appendix, about 15s.
*Appendix to Report of the School Management Committee. 1887-1897.		
*Report of the Bye-Laws Committee. 1872-1891. (Continued as School Attendance Report.)	Not for sale.	
*School Attendance Report. 1892-1897.	- ditto.	
*Report of the Statistical Committee. 1877-1891. (Continued as School Accommodation Report.)	- ditto.	
*School Accommodation Report. 1892-1897.	- ditto.	
*Report of the Industrial Schools Committee. 1882-1897.	- ditto.	
*Report of the Evening Classes Committee. 1882-1891. (Continued as Report on Evening Continuation Schools.)	- ditto.	
*Report on Evening Continuation Schools. 1891-1897.	- ditto.	

Title of Report or Publication.	Where obtainable.	Price.
<b>London—continued.</b>		
*Report on the Examination in Scripture Knowledge. 1894-1896.	Not for sale.	
*Report of the School Board for London to the Education Department. 1872.	- ditto.	
Report on the Methods of Teaching Reading; in reply to a reference from the Board of July 4, 1877.	- ditto.	
*Report on City Parochial Charities. 1879.	- ditto.	
*Report on City Companies Charities. 1881.	- ditto.	
*Reports of the Special Committee on the Comparative Cost of School Maintenance. 1880-81.	- ditto.	
*Report of the Special Committee on the Question of Overpressure in the Schools of the Board. 1885.	- ditto.	
*Report of the Special Committee on the Mode of Election and Powers of Managers. 1887.	- ditto.	
*Report of the Special Committee on Subjects and Modes of Instruction in the Board's Schools. 1888.	- ditto.	
*Reports of the Special Committee on the Work of the Works Department. 1888.	- ditto.	
*Report of a Special Committee on Underfed Children attending School. 1895.	- ditto.	
*Report by the Medical Officer on the Prevalence of Diphtheria in London and elsewhere, and its alleged connection with the Elementary Schools. 1896.	- ditto.	
*Report of the Special Sub-Committee of the School Management Committee on Method in Infant Schools. 1897.	- ditto.	
*Reports of the Joint Committee on Manual Training to the School Board for London, the City and Guilds of London Institute, and the Worshipful Company of Drapers. 1893-97.	- ditto.	
*Code of Regulations and Instructions for the Guidance of Managers, Correspondents and Teachers.	- ditto.	
*Code of Regulations for the Guidance of Managers and Teachers of Evening Continuation Schools.	- ditto.	
<b>Manchester:</b>		
*General Report of the City of Manchester School Board. (Triennial.)		
*Directory of Evening Continuation Schools and Classes. (Annual.)		



Title of Report or Publication.	Where obtainable.	Price.
<b>Newcastle-upon-Tyne :</b>		
*Triennial Report of the School Board of the City and County of Newcastle-upon-Tyne. 1871-73 to 1895-97.		
<b>Nottingham :</b>		
*Triennial Report upon the work of the Board.		
*Report of the School Management Committee. (Annual.)		
*Report of the Evening Schools Committee. (Annual.)		
*Reports of Examiners of Scripture Teaching. (Annual.)		
Regulations for the management of Board Schools. (Published at irregular intervals.)		
*Prospectus of Evening Classes. (Annual.)		
Higher Grade School Prospectus. (Annual.)		
School Hygiene and Surgery, and Eye-tests.	Longmans, Green & Co., London.	1s.
School Hygiene Leaflets - - -	Arnold & Son, Leeds	1s. per 100.
First-Aid Case arranged by Board to accompany above.	Richardson & Co., Wholesale Chemists, Leicester.	7s. 6d.
* "Echoes," the official magazine of the Board. (Monthly.)	Sisson & Parker, School Publishers, Nottingham.	1d.
<b>Oldham :</b>		
*Report of the work of the Board. (Triennial.)		
*Prospectus of Evening Continuation Schools and Classes. 1897-98.		
*Address by Dr. Yates, Chairman of the Oldham School Board, at the opening of Derker Board School, April 2, 1898.		
<b>Portsmouth :</b>		
No publications.		
<b>Salford :</b>		
*†Triennial Report of the work of the Board 1873-1897. (Reports, 1873-1882. O. P.)	Not obtainable.	
*†Annual Returns of Day Schools, with particulars of Income and Expenditure, and cost per Scholar.	- ditto.	
*†Annual Report and Returns of Evening Continuation Schools.	- ditto.	
*Official Manual.		

† Can be consulted at the School Board Offices, Salford.

Title of Report or Publication.	Where obtainable.	Price.
<b>Sheffield:</b>		
*†Annual Report of the Sheffield School Board.	The Clerk to the School Board, School Board Offices, Sheffield.	
*†Copies of H. M. Inspectors' Reports, Statistics, &c., and Biblical Reports. (Annual.)		
*†Handbook of Information for the use of the members of the Board. (Annual.)		
*†Regulations for the Management of Schools.		
*†Prospectus of Evening Classes. 1897-8.		
Conference on Co-ordination		
*Notes on Continental Schools. By John F. Moss (Clerk to the Sheffield School Board). 1872.		
*Notes on National Education in Continental Europe. By John F. Moss. 1873.		
<b>IV.—W A L E S:</b>		
<b>1.—COUNTY COUNCILS:</b>		
<b>Anglesey:</b>		
No Publications.		
<b>Breconshire:</b>		
No Publications.		
<b>Cardiganshire:</b>		
Quarterly Reports of the Technical Instruction Committee and of the County Council.	The Clerk of the County Council, Aberystwyth.	
<b>Denbighshire:</b>		
†Quarterly Reports of the Proceedings of the County Council and the several Committees.		
<b>Glamorganshire:</b>		
Report of the Organising Secretary to the Technical Instruction Committee. (Quarterly.)	Not obtainable	
Report of the Technical Instruction Committee. (Quarterly.)	ditto	

† Can be consulted at the School Board Offices, Sheffield.

‡ Can be consulted at the office of the Clerk to the County Council, 5, Castle Street, Ruthin.

Title of Report or Publication.	Where obtainable.	Price.
<p><b>WALES</b>—<i>continued.</i></p> <p><b>Merionethshire :</b></p> <p>No Publications.</p> <p><b>Monmouthshire :</b></p> <p>*Report of the Technical Instruction Committee. July 21, 1891. (Containing Scheme of Technical Instruction.)</p> <p>*Quarterly Report of the Director to the Technical Instruction Committee.</p> <p>*Agricultural Education : Quarterly Report of the Organising Secretary to the Technical Instruction Committee.</p> <p>*University College of South Wales and Monmouthshire. County Free Studentships and Scholarships.</p> <p>*Syllabuses of Lectures on the Science of the Mine, Chemistry, Chemistry of Common Things, Geology, Ambulance and Home Nursing.</p> <p>*Notes on Fruits for Monmouthshire. By W. J. Grant.</p> <p>*Simple Cookery. By Hester Davies</p> <p><b>Montgomeryshire :</b></p> <p>No Publications.</p> <p><b>Radnorshire :</b></p> <p>No Publications.</p>	<p>McCorquodale &amp; Co., Cardington Street, Euston, London, N.W.</p>	<p>2d.</p>
<p><b>2.—COUNTY BOROUGH COUNCILS.</b></p> <p><b>Cardiff :</b></p> <p>*Report of the Technical Instruction Committee to the County Council. (Annual.)</p> <p>*Technical School of the County Borough of Cardiff. Principals' Report. (Annual.)</p> <p>*The Secretary's Report to the Technical Instruction Committee. (Quarterly.) (Showing the number of students attending the Committee's Classes, Fees received, &amp;c.)</p>	<p>J. Austin Jenkins Esq., University College, Cardiff.</p> <p>- - ditto.</p> <p>- - ditto.</p>	



Title of Report or Publication.	Where obtainable.	Price.
<p align="center"><b>WALES—continued.</b></p> <p><b>Cardiff—continued.</b></p>		
<p>*Book containing:—</p> <p>(1.) Agreement between the Technical Instruction Committee and the Council of the University College of South Wales and Monmouthshire, dated 25th September 1890.</p> <p>(2.) Agreement between the County Borough of Cardiff and the Council of the University College of South Wales and Monmouthshire, respecting the Higher Technical Department of the College.</p> <p align="center">etc., etc.</p>	<p><b>J. Austin Jenkins</b> Esq., University College, Cardiff.</p>	
<p><b>Newport, Mon.:</b> No Publications.</p>		
<p><b>Swansea:</b> No Publications.</p>		
<p align="center"><b>3.—COUNTY GOVERNING BODIES.</b></p>		
<p><b>Anglesey:</b> Annual Report of Beaumaris School.</p>		
<p><b>Breconshire:</b> Annual Report of the Intermediate School at—</p>		
<p>(1.) Brecon (Boys) - - - -</p>	<p>H. O. A. Maybery, Esq., Priory, Brecon.</p>	<p>Probably free.</p>
<p align="center">Ditto (Girls) - - - -</p>	<p align="center">- - ditto - - - -</p>	<p align="center">- ditto.</p>
<p>(2.) Brynmawr (Dual) - - - -</p>	<p><b>John Thomas, Esq.,</b> Urban District Council Office, Brynmawr.</p>	<p>- ditto.</p>
<p>(3.) Builth (Dual) - - - -</p>	<p><b>Christopher Wearn,</b> Esq., Gwynfryn, Builth, R.S.O.</p>	<p>- ditto.</p>
<p><b>Cardiganshire:</b> No Publications.</p>		
<p><b>Carnarvonshire:</b> *Report on Technical Education for Carnarvonshire, by A. B. Hodger, Technical Adviser to the County Governing Body.</p>		
<p><b>Denbighshire:</b> *The Denbighshire Intermediate Education Scheme. No. 11. 1894.</p>	<p>The Clerk to the Governing Body, 5, Castle Street, Ruthin.</p>	<p align="center">6d. Post free, 9d.</p>
<p>*Quarterly Reports of the Meetings of the Governors.</p>		
<p>† Can be consulted at the Office of the Clerk to the County Council, 5, Castle Street, Ruthin.</p>		

Title of Report or Publication.	Where obtainable.	Price.
<b>WALES—continued.</b>		
<b>Glamorganshire:</b> Quarterly Report of the Organising Agent to the County Governing Body.	Not obtainable.	
<b>Merionethshire:</b> *Report on the Examination of the County Schools. 1896.	R. Jones Griffith Esq., Clerk to the Governing Body, Dolgelly.	
<b>Monmouthshire:</b> *Monmouthshire Welsh Intermediate Education Scheme, dated 7th August 1894. †Regulations as to County Scholarships, April 1897.		
<b>Montgomeryshire:</b> Montgomeryshire Intermediate Education Scheme. †Reports of the Meetings of the Governors.	George D. Harrison Esq., County Council Offices, Welshpool.	6d. Post free, 8d.
<b>Newport, Mon.:</b> No Publications.		
<b>Radnorshire:</b> *Scheme for the Administration of the Funds applicable to the Intermediate and Technical Education of the Inhabitants of the County of Radnor.	D. C. Davies Esq., Clerk to the County Governing Body, Llandrindod Wells.	Post free, 7d.
<b>Swansea:</b> Prospectus of Evening Classes - -	The Secretary to the County Governing Body, Grammar School, Swansea.	Post free, 1d.
Report of an Inquiry into Continental Methods of Education, with special reference to Metallurgy.	- - ditto - -	Post free, 1d.
<b>4.—CENTRAL WELSH BOARD.</b>		
First Annual Report of the Central Welsh Board, with Statement of Accounts and Appendices. 1898.	T. Owen, Printer, Bookbinder, &c., The Library, Oswestry.	1s.

† Can be consulted at the office of the Clerk to the County Council, Welshpool.

MARY S. BEARD,  
July 1898.

### Les Universités Françaises.

Une loi, en date du 10 juillet 1896, a constitué en Universités les quinze groupes de facultés qui existaient sur le territoire de la République française, Paris, Bordeaux, Lille, Lyon, Montpellier, Nancy, Toulouse, Aix-Marseille, Caen, Dijon, Grenoble, Poitiers, Rennes, Besançon et Clermont. Six décrets, en date, trois du 21 juillet 1897, deux du 22 un du 31, ont déterminé l'organisation scientifique, l'organisation scolaire, l'organisation civile et l'organisation financière de ces Universités. Cette loi et ces décrets sont une date dans l'histoire de l'enseignement supérieur français. Ils y marquent la fin d'une étape et le commencement d'une autre. Ils sont le terme d'une entreprise menée depuis plus de vingt ans avec suite, méthode et constance.

Il ne faudrait pas croire en effet que les Universités françaises sont sorties, comme un nouvel état de choses, de la loi de 1896. Elles se sont faites, pendant de longues années, pièce à pièce, morceau par morceau, et fait peut-être unique dans la méthode législative de la France, ici, la loi n'a pas créé, elle n'est intervenue qu'à la fin, pour confirmer, pour reconnaître ce que progressivement l'expérience avait réalisé. Aussi pour comprendre cette œuvre, ne suffit-il pas de lire les textes législatifs et réglementaires où elle est formulée, ni même de savoir quelles idées théoriques en ont dirigé la construction, mais faut-il en chercher les raisons dans le passé et dans l'histoire de la France.

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Il y avait, dans la monarchie française, au moment de la Révolution, vingt-et-une Universités. Elles étaient toutes languissantes, presque agonisantes. La vie qui les avait animées au moyen-âge s'était peu à peu retirée d'elles. Renfermées dans un formalisme traditionnel, elles n'avaient pas su ou n'avaient pas voulu s'ouvrir à la science, et tout l'esprit philosophique et scientifique du XVIII<sup>e</sup> siècle avait germé, poussé, fleuri et fructifié hors de leurs enceintes. Aussi n'est-il pas surprenant que la Révolution, née de cet esprit, les ait supprimées ou laissé disparaître. À leur place, avec Mirabeau, avec Talleyrand, avec Condorcet, elle voulut mettre de grandes écoles encyclopédiques réunissant, organiquement, tout ce qu'enfante, tout ce que constate, tout ce que découvre l'esprit humain en quête de vérité et de beauté. Mais cette idée, d'où sortit plus tard, aux derniers jours du régime révolutionnaire, l'Institut de France, devait rester projet et lettre morte. À ces écoles, qui eussent été les premiers types des Universités modernes, construites pour la science et animées de son esprit, la pénurie des finances, les nécessités du temps, l'urgence des solutions pratiques, firent substituer les écoles spéciales, les écoles de services publics, destinées au recrutement de certaines fonctions, de certaines carrières, École Polytechnique, École normale, Écoles de médecine, Écoles de



droit, où la science ne pénétrait que fragmentairement et comme un moyen pour une profession déterminée, et pour la science pure il n'y eut que le Collège de France, legs de l'ancienne monarchie, resté debout dans la tourmente, le Muséum d'histoire naturelle, organisé par la Convention dans l'ancien Jardin du Roi, et l'Institut, l'œuvre propre de la Convention, où se réalisait la pensée même de l'Encyclopédie et de la Révolution sur la parenté et l'unité fondamentales de toutes les sciences, mais qui n'était pas, qui ne pouvait pas être une école.

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Le mot *université* reparut sous le premier Empire, mais au singulier, non au pluriel, et avec un sens tout différent de celui qu'il avait eu sous l'ancien régime et de celui que de plus en plus il allait prendre dans le reste de l'Europe.

Génie centralisateur à outrance, Napoléon voulut avoir pour distribuer l'instruction et l'éducation, un seul corps comme il y avait un Empire unique et indivisible, et de ce corps il fit une vaste administration relevant d'un seul chef et comprenant tous les degrés de l'enseignement. Ce fut l'Université impériale, organe unique de l'instruction nationale, dont son fondateur voulut faire, sans y réussir, un instrument de règne et de domination.

Dans cette Université ainsi conçue, ainsi construite, il ne pouvait y avoir place pour des Universités vaquant aux vraies besognes de l'enseignement supérieur, avec l'indépendance que réclame la science. On se borna à changer le nom des Écoles de droit et de médecine qui existaient ; on les appela Facultés, sans en modifier la destination et l'organisme ; elles restèrent des écoles professionnelles chargées de former et d'estampiller les médecins, les avocats et les magistrats dont avait besoin la société. À côté d'elles, mais sans les unir à elles, on créa, en trop grand nombre, des facultés des sciences et des facultés des lettres, dont l'office principal fut, non l'enseignement, non la science, mais la collation des grades institués par l'État, conférés par lui, exigés par lui comme garanties publiques, à l'entrée de certaines professions et fonctions.

Les choses allèrent ainsi, sauf modifications de détail, pendant la Restauration, pendant le Gouvernement de Juillet et pendant le second Empire. Ce n'est pas à dire que dans ces cadres fragmentaires et dispersés, l'enseignement des facultés françaises ait été sans utilité et sans éclat. À qui le contesterait, il suffirait de rappeler les cours de Guizot, de Villemain et de Cousin, sous la Restauration, sans parler d'autres professeurs éminents qui se distinguèrent plus tard. Mais l'éclat même de cet enseignement oratoire, s'adressant de la chaire professorale, comme d'une tribune, à ce qu'en France on a appelé le grand public, est la preuve qu'en dehors des facultés de médecine et de droit à qui leur destination professionnelle assurait une clientèle d'étudiants, les facultés des lettres et des sciences n'avaient pas d'étudiants, et qu'elles n'étaient pas des écoles. Ce n'est pas à dire non plus que pendant cette longue période la science française ait été

inféconde. À qui le soutiendrait, il suffirait de citer, entre beaucoup d'autres, les noms de Cauchy, de Poisson, d'Ampère, de Burnouf, d'Abel Rémusat, de Champollion, de Regnault, de Balard, de Wurtz, de Laënnec, de Magendie, de Claude Bernard et de Pasteur. Mais leurs découvertes sont œuvre de génie et le génie finit toujours par trouver ses issues, même dans les milieux les plus défavorables. La vérité est, que pendant toute cette période, avec un admirable état-major d'inventeurs et d'initiateurs, la France n'a pas eu des cadres suffisants d'officiers et de sous-officiers de la science, et cela, c'est bien un résultat de l'organisation défectueuse de son enseignement supérieur, et de l'indifférence avec laquelle le regardaient alors la nation et les pouvoirs publics.

Ce n'est pas à dire d'avantage que, pendant cette période, aucune idée d'une organisation meilleure ne se soit manifestée. Dès le début du Gouvernement de Juillet, Guizot s'était proposé de créer en France un certain nombre d'Universités et d'en faire des foyers capables de ranimer dans les départements la vie intellectuelle dont il déplorait le dépérissement, quelques années plus tard, Cousin, alors Ministre de l'Instruction publique, parut reprendre la même idée. Mais ils furent empêchés l'un et l'autre de la réaliser par les vicissitudes de la politique et aussi, il faut le dire, par l'indifférence publique. C'est seulement tout-à-fait à la fin du second Empire, après la création par V. Duruy de l'École des Hautes-Études, qu'à la voix de savants français, au courant des progrès réalisés à l'étranger, un certain mouvement commença à se manifester en faveur de l'enseignement supérieur, et qu'on dénonça ses imperfections et ses misères. Une commission, présidée par Guizot, en même temps qu'elle prépara un projet sur la liberté de cet ordre d'enseignement, proposa quelques réformes qui lui semblaient de nature à ranimer les facultés de l'État.

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Interrompu brusquement par la guerre de 1870, le mouvement reprit aussitôt après avec une rare intensité. À partir de ce moment, ce fut un axiome, sinon pour la masse du public, du moins pour la plupart de ceux qui s'adonnent aux travaux de l'esprit et qui des faits remontent aux causes, qu'une réforme de l'enseignement supérieur s'imposait, qu'elle était un des éléments, et non le moins important, du relèvement du pays, qu'elle faisait partie intégrante de la défense nationale. Des milieux intellectuels et scientifiques, cette opinion passa dans les milieux politiques et à partir de l'avènement aux affaires du parti républicain, la réforme de l'enseignement supérieur devint un article du programme républicain, non pas sans doute avec la même netteté et la même généralité que "l'instruction primaire laïque, gratuite et obligatoire," mais assez nettement cependant, avec assez de persistance pour que chacun des Ministres de l'Instruction publique qui se sont succédé de 1875 à 1896, ait cru devoir apporter sa pierre à l'édifice et que tous aient soutenu les hommes qui, à côté de lui et dans les milieux savants, ont été les ouvriers de l'entreprise.



Sous quelle forme générale pouvait et devait s'entreprendre cette réforme de l'enseignement supérieur ? Il n'y a que deux formes pour le haut enseignement des lettres et des sciences : les Écoles spéciales, où n'est enseignée et cultivée qu'une partie déterminée de la science, et les Universités, où toutes les sciences se rencontrent, avec leurs instruments divers, organiquement groupées et coordonnées, comme le seraient dans un cerveau encyclopédique, les diverses branches du savoir humain. Les facultés françaises, juxtaposées, sans liens, sans communications de l'une à l'autre, avaient été, malgré leur nom, des écoles spéciales. Elles étaient jugées à leurs résultats, et ces résultats condamnaient la forme où elles avaient languï. Restait l'autre forme, la forme universitaire. C'était la seule possible. Aussi bien on avait pu voir quels résultats elle avait produits à l'étranger.

Il serait inexact de dire que ceux qui assignèrent comme but à la réforme de l'enseignement supérieur français la constitution d'Universités françaises, aient été obsédés par l'imitation de l'étranger. Les Universités, nom et chose, sont d'origine française. D'origine française est également l'idée de la corrélation des sciences que les Universités modernes s'efforcent, en tout pays, de réaliser. Ce fut, au XVIII<sup>e</sup>. siècle, l'idée de nos Encyclopédistes, et c'est d'eux incontestablement que la tint Auguste Comte. Cette conception des Universités apparut dès lors, d'abord lointaine et vague, puis peu à peu plus prochaine et plus nette, à mesure que se formaient et s'agençaient les organes destinés à la réaliser, comme le but vers lequel il fallait diriger les efforts, et c'est sous son action que tout ce qui s'est fait, a été fait. Elle a été la cause motrice de tout le mouvement de réformes, parce qu'elle en a été la cause finale.

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Multiple et complexe était l'œuvre ; il fallait l'entreprendre à la fois sur plusieurs points du territoire, en faire marcher de front les diverses parties, et cependant procéder avec prudence, ne rien précipiter, ne violenter personne, et de chaque progrès acquis tirer la raison d'un progrès nouveau.

On a peine aujourd'hui à se figurer quelle était à la fin du second Empire la misère matérielle des facultés françaises. Leurs installations étaient souvent honteuses, toujours insuffisantes. On entreprit de leur construire des locaux appropriés à leurs besoins, et pour cette coûteuse opération, qui se termine à peine, l'État trouva partout, auprès des villes, le plus large concours. C'est par centaines de millions que se chiffrent les dépenses résultant de ce chef ; les villes en ont fourni à peu près la moitié.

Comme les bâtiments, tout l'outillage scientifique était à créer. Il sera bientôt complet et il pourra supporter la comparaison avec celui des autres pays d'Europe.

Partout les enseignements étaient en nombre insuffisant. J'ai été, en 1874, professeur à la Faculté des Lettres de Bordeaux. Nous étions six en tout : un professeur de philosophie, un professeur



d'histoire et de géographie, un professeur de langue et littérature grecques, un professeur de langue et littérature latines, un professeur de littérature française, et un professeur pour les littératures étrangères, et encore n'étions nous pas les plus mal partagés. Aujourd'hui, la Faculté des Lettres de l'Université de Bordeaux comprend les enseignements suivants : Philosophie, histoire de la philosophie, sociologie, pédagogie, langue grecque, littérature grecque, langue latine, littérature latine, littérature française, langues d'origine romane, littératures du midi, langue et littérature allemandes, langue et littérature anglaises, archéologie de l'antiquité, histoire ancienne, histoire moderne et contemporaine, histoire du moyen-âge, histoire du Sud-Ouest de la France, géographie générale, géographie coloniale. La comparaison de ces deux listes permet de mesurer le développement. Et il en a été de même, avec des proportions diverses, dans les autres facultés des lettres, dans toutes les facultés des sciences, dans les facultés de droit et dans celles de médecine.

Dépourvu de ses enseignements essentiels, car c'est en être vraiment dépourvu que de n'avoir qu'un seul professeur pour toutes les parties de l'histoire et de la géographie, un seul pour toutes les branches des sciences naturelles, comme c'était le cas pour les facultés des lettres et des sciences, celles de Paris exceptées, l'enseignement supérieur manquait d'instruments de travail. Pas de bibliothèques, pas ou peu de collections, sauf des collections d'histoire naturelle mises à la disposition des facultés par les villes ; des crédits dérisoires pour frais de cours, pour travaux de laboratoire. Aujourd'hui, à cette misère a succédé, je ne dis pas la richesse, mais l'aisance. Deux chiffres suffisent à mettre en saillie la différence d'hier à aujourd'hui. Hier, c'est-à-dire en 1870, dernière année du second Empire, les sommes affectées aux facultés par l'État étaient de 4,245,521 fr. Aujourd'hui, en l'an 1897, l'État contribue aux dépenses ordinaires des Universités pour 12,905,678 fr., soit une augmentation de 8,660,157 fr. Et ce n'est pas tout. Grâce aux dispositions qui leur ont assuré la vie civile, et dont il sera question plus loin, facultés et Universités disposent par an de 500,000 fr. de revenus et de subventions leur appartenant en propre ; et à dater du 1<sup>er</sup> janvier 1898, les Universités vont, en vertu de l'article 4 de la loi du 10 juillet 1896, percevoir à leur profit les droits d'études, d'inscription, de bibliothèque et de travaux pratiques que le trésor public encaissait jusqu'ici. Ce sera pour elles une recette d'environ 1,800,000 fr., et, comme l'État ne diminuera ses subventions que de 400,000 fr., un profit de 1,400,000 fr.

En même temps que l'état des choses, il fallait, pour en faire un jour des Universités, modifier dans les facultés les habitudes et l'état des esprits ; dans les facultés de médecine, faire pénétrer l'esprit d'expérimentation ; dans les facultés de droit, à l'esprit juridique, abstrait et déductif, ajouter l'esprit réaliste de l'histoire et des sciences économiques ; dans les facultés des sciences et des lettres, développer l'esprit critique et l'esprit de recherche, aux expositions oratoires si fort en honneur substituer des méthodes



didactiques, et pour cela, dans ces facultés qui n'en avaient pas ou n'en avaient que de très rares, créer un public d'étudiants. C'était de la tâche, la partie la plus délicate, la plus difficile et la plus lente. Elle ne pouvait se réaliser que par les bonnes volontés individuelles et par l'action des maîtres. Ces bonnes volontés se sont rencontrées, cette action n'a pas fait défaut, et aujourd'hui, malgré quelques restes d'indécision, inévitables tant que l'évolution en cours ne sera pas pleinement achevée, on peut dire que les Universités françaises ont vraiment conscience de leur triple fonction, ou plutôt des trois degrés de leur fonction scientifique: être au premier degré des milieux de culture générale, au second des milieux de préparation professionnelle, et au sommet, pour l'élite des étudiants, des milieux des recherches savantes.

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C'est de ces idées qu'on s'est inspiré dans la réglementation nouvelle des examens subis devant les facultés. Le meilleur programme pour une Université, c'est de n'en pas avoir. Le meilleur régime pour les maîtres c'est la pleine liberté d'enseignement, et pour les étudiants, la pleine liberté de choix, à leurs risques et périls, entre les divers enseignements de l'Université, suivant leurs goûts, leurs aptitudes et leurs desseins d'avenir. En France, ce régime est impossible, du moins pour de longues années encore. En voici la raison.

En France, les grades conférés par les facultés sont grades d'État et non pas, comme ailleurs, degrés purement académiques. L'État les a institués, au commencement du siècle, comme des garanties publiques de capacité, et les exigeant à l'entrée de certaines fonctions et de certaines professions, il y a attaché certains droits, certains privilèges. Ainsi nul ne peut exercer la médecine en France s'il n'est docteur en médecine; nul ne peut tenir officine de pharmacien s'il ne possède pas un diplôme spécial; nul ne peut être avocat, magistrat, s'il n'est pas licencié en droit. Mais qui dit grade d'État, dit programme tracé par l'État. Le diplôme étant une garantie publique de capacité, l'État doit dire de quelle capacité il est la preuve. De cette doctrine, au changement de laquelle l'esprit public en France serait réfractaire, peut sortir l'asservissement, et partant la stérilité de l'enseignement supérieur. Il fallait donc, tout en la respectant, l'assouplir, et tout en conservant aux grades leur caractère de garanties, introduire dans les examens et par suite dans les études qui y conduisent, tout le jeu compatible avec ce caractère. Il fallait en même temps organiser les grades de telle façon qu'ils pussent suivre les progrès de la science, au lieu de les arrêter.

Les grades, en France, sont au nombre de trois: le baccalauréat, la licence et le doctorat. Du baccalauréat, je ne parlerai pas. Dans les facultés des lettres et des sciences, il est la sanction des études secondaires, faites dans les lycées et les collèges; dans les facultés de médecine, il n'existe pas, non plus d'ailleurs que la licence; dans les facultés de droit, il fait corps avec la licence. Je me bornerai à la licence et au doctorat.

Dans les facultés des lettres, autrefois la licence comportait les épreuves suivantes : une dissertation en français, une dissertation en latin, des vers latins et un thème grec ; puis, comme épreuves orales, l'explication d'un texte grec, d'un texte latin, d'un texte français. Pas d'histoire, pas de philosophie, pas de littératures étrangères, ni obligatoirement, ni facultativement. C'était donc un examen de culture classique, avec de purs exercices d'enseignement secondaire. Une première réforme consista à introduire dans la licence les matières qui n'y avaient pas place. On distingua les épreuves en épreuves communes et en épreuves spéciales ; comme épreuves communes les deux dissertations et les trois explications classiques d'autrefois ; comme épreuves spéciales, au choix des candidats : ou un thème grec et une composition de grammaire et de métrique, ou des compositions et des interrogations d'histoire, ou des compositions et des interrogations de philosophie, ou des compositions de langues vivantes et des explications d'auteurs anglais ou allemands. Plus récemment, ces cadres encore assez rigides ont été assouplis, et l'on s'est efforcé de donner au maître et à l'élève plus de liberté, tout en conservant à l'examen l'unité qu'il doit avoir tant que le grade sera grade d'État. Naguère les listes d'auteurs à expliquer étaient arrêtées pour toutes les facultés par le Ministre de l'Instruction publique. Maintenant, tous les deux ans, chaque faculté dresse elle-même la liste des auteurs que ses maîtres étudieront pour la licence. Naguère, ne pouvaient trouver place dans l'examen que les matières inscrites au programme. Maintenant, pour une des épreuves écrites, chaque candidat peut choisir une des matières enseignées dans la faculté. Enfin, pour cette même épreuve, à la composition faite en un temps donné sur un sujet donné, le candidat peut substituer un travail de sa composition, fait à loisir, sur un sujet choisi par lui et agréé par un des maîtres de la faculté.

Le doctorat ès lettres est resté ce qu'il était, et vraiment il n'appelait pas de changements. Il consiste dans la composition de deux thèses, l'une en français, l'autre en latin, sur deux sujets choisis par le candidat, et dans la soutenance publique de ces thèses. Depuis nombre d'années, ces épreuves sont des épreuves scientifiques, du degré le plus élevé, et nombre de thèses soutenues devant les facultés des lettres sont des contributions définitives à la science.

Il en est de même du doctorat ès sciences. Les deux thèses qu'il faut composer et soutenir pour l'obtenir, sont toujours des travaux importants, très souvent des travaux originaux, et nombre d'entre elles sont devenues classiques. Là, comme au doctorat ès lettres, il n'y avait qu'à maintenir, non à changer. À la licence ès sciences, au contraire, un certain nombre de modifications ont paru nécessaires. Il y avait trois licences : licence ès sciences mathématiques, licence ès sciences physiques, licence ès sciences naturelles et chacune d'elles comprenait des épreuves écrites, orales et pratiques sur trois matières : la première sur le calcul différentiel et intégral, la mécanique rationnelle et l'astronomie ; la deuxième, sur la physique, la



chimie et la minéralogie ; la troisième, sur la zoologie, la botanique et la géologie. Il en résultait que certaines matières enseignées dans les facultés des sciences, par exemple l'algèbre supérieure, la physiologie, la chimie biologique, etc., ne pouvaient être représentées dans l'examen ; il en résultait aussi que les candidats n'avaient le choix qu'entre des groupes de matières, et qu'un groupe choisi, les matières qu'il contenait leur étaient imposées, quels que fussent d'ailleurs leurs aptitudes et leurs goûts. Pour remédier à ces inconvénients, il a suffi de dénouer ces groupements obligatoires et de donner aux candidats toute liberté de choix. Désormais toute faculté des sciences délivre, après examens, des certificats d'études supérieures. Ces certificats correspondent aux matières enseignées par elle ; la liste en varie d'une faculté à l'autre, car toutes n'ont pas même nombre d'enseignements. Ainsi la physiologie est enseignée à Lyon et à Paris ; elle ne l'est pas à Nancy et à Lille ; la chimie industrielle a une chaire et des laboratoires à Lyon et à Nancy ; elle n'en a pas à Poitiers et à Dijon. Entre ces matières, l'étudiant choisit celles qu'il veut étudier ; et quand il a obtenu trois certificats d'études supérieures, soit devant la même faculté, soit devant plusieurs facultés différentes, en échange, il reçoit le diplôme de licencié. C'est le régime de la liberté complète. Inauguré depuis deux ans seulement, il commence à produire d'heureux résultats.

D'importantes réformes ont été faites également dans le régime des études et des examens des facultés de droit, licence et doctorat. Autrefois, dans cet ordre de facultés, les études étaient purement juridiques et professionnelles, et elles ne comprenaient que le droit romain, le droit civil français, le droit pénal, la procédure et le droit administratif. On y a ajouté peu à peu l'histoire du droit, le droit constitutionnel, les principes du droit public, le droit international et les sciences économiques. Aujourd'hui les études y sont distribuées de la manière suivante

Au premier degré, la licence, qui dure trois ans et qui est commune à tous les étudiants. Elle comprend, en première année : l'ensemble des institutions juridiques de Rome exposées dans leur développement historique, le droit civil français, l'histoire générale du droit français, les éléments du droit constitutionnel français et l'économie politique ; en seconde année : les matières du droit romain qui se rapportent particulièrement au droit français, le droit civil, le droit criminel, le droit administratif et les principes du droit international public ; en troisième année : le droit civil, le droit commercial, le droit international privé, la procédure civile et la législation financière. Au second degré, le doctorat, dont les études durent deux ans, et qui se divise en deux branches, le doctorat ès sciences juridiques et le doctorat ès sciences politiques et économiques. Le doctorat en droit n'est pas, comme le doctorat ès lettres et le doctorat ès sciences, un examen entièrement libre. Sans doute le candidat doit composer et soutenir une thèse sur un sujet de son choix ; mais ce n'est pas la seule épreuve, et avant d'y être admis, il faut avoir subi avec succès deux examens dont les matières sont obligatoires. Au doctorat ès sciences juridiques, ces matières sont : le droit

romain, avec une interrogation sur les Pandectes, deux parties du droit civil français choisies par le candidat, l'histoire du droit français et, au choix du candidat, le droit criminel, les juridictions et le contentieux en droit administratif, ou le droit civil comparé. Au doctorat ès sciences politiques et économiques : l'histoire du droit public français, les principes du droit public, le droit constitutionnel comparé et, au choix du candidat, le droit administratif ou le droit international public ; l'économie politique et l'histoire des doctrines économiques, la législation française des finances et la science financière, et, au choix des candidats, la législation et l'économie industrielles, la législation et l'économie rurales, ou la législation et l'économie coloniales.

Le régime des études et des examens en vue du doctorat en médecine a été, en 1894, l'objet de quelques remaniements et retouches. Il est ainsi fixé : Quatre années réglementaires d'études, qui en fait ne suffisent pas et sont le plus souvent suivies d'une ou de plusieurs années complémentaires. Au cours et à la suite de ces études, cinq examens : au premier, l'anatomie, moins l'anatomie topographique, avec épreuve pratique de dissection ; au second, la physiologie, y compris la physique biologique et la chimie biologique ; au troisième, la médecine opératoire, avec l'anatomie topographique, la pathologie externe, la théorie des accouchements, la pathologie générale (parasites animaux et végétaux, microbes), la pathologie interne avec une épreuve pratique d'anatomie pathologique ; au quatrième, la thérapeutique, l'hygiène, la médecine légale, la matière médicale, la pharmacologie, avec les applications des sciences physiques et naturelles ; au cinquième, des épreuves théoriques et pratiques de clinique médicale, de clinique chirurgicale et de clinique obstétricale. Après les cinq examens, la soutenance publique d'une thèse sur un sujet choisi par le candidat dans l'encyclopédie des sciences médicales.

Mais tout cela n'a été que le rajeunissement et la remise au point de réglemens vieillis qui ne cadraient plus avec l'état présent de la science. La vraie réforme des facultés de médecine a été faite, en dehors d'elles, dans les facultés des sciences. Jusqu'en 1894, pour être admis aux études médicales, l'étudiant devait simplement justifier des baccalauréats de l'enseignement secondaire. Son initiation scientifique était insuffisante, il ne savait de physique, de chimie, de sciences naturelles que ce qu'on en enseigne dans le cours ordinaire des lycées et collèges, et ce qu'il en savait, il le savait d'une façon théorique, sans pratique expérimentale. On essayait bien, dans la première année d'études à la faculté de médecine, de remédier à cette insuffisance, mais c'était au détriment des études médicales. En 1894, après avoir fait pendant trois années l'expérience du régime projeté dans la Faculté de Toulouse, on a pris le parti de faire passer les futurs étudiants en médecine par la faculté des sciences, avant de les admettre aux études médicales. Ils y restent un an. Pendant cette année, ils y reçoivent un enseignement, à la fois théorique et pratique, de la physique, de la chimie, de la zoologie et de la botanique. Aux cours oraux des professeurs sont jointes chaque



jour des séances de travaux pratiques, obligatoires pour tous les étudiants ; les examens qui sont la sanction de ces études préparatoires comportent également des épreuves théoriques et des épreuves pratiques, et désormais tout étudiant qui entre à la faculté de médecine sait, en physique, en chimie, en zoologie et en botanique, ce qu'il faut savoir pour aborder avec profit les études médicales ; il sait faire une analyse chimique, prendre une température, une mesure électrique ; le maniement du microscope ne lui est pas inconnu ; il sait tailler une coupe micrographique, la voir, la dessiner.

Les avantages immédiats de cette organisation sautent aux yeux. Il en est un autre, plus interne, que je dois signaler. J'ai déjà dit que, jusqu'en 1885, les facultés françaises avaient vécu, côte à côte, sans rapports entre elles, sans coordination, parfois même sans se connaître. Pour faire d'elles des Universités, c'est-à-dire des corps vivant d'une vie commune, il fallait, entre elles, établir des liaisons. L'organisation des études scientifiques et des études médicales de 1894, est une de ces liaisons. Désormais la faculté des sciences et la faculté de médecine, tout en ayant chacune sa fonction propre, se trouvaient réunies et coordonnées pour une œuvre commune. Des liaisons analogues ont été établies entre les autres facultés. Ainsi à la licence ès lettres, le candidat peut, pour l'épreuve d'option choisir une matière se rapportant à ses études et enseignée dans une autre faculté, par exemple, s'il est philosophe, l'anatomie, la physiologie, la physique, la chimie, le droit public, ou l'économie politique ; s'il est historien, l'histoire du droit, le droit constitutionnel, le droit romain, etc. De même au doctorat en droit, sciences politiques et économiques, pour l'épreuve à option, le candidat peut présenter une des matières d'ordre historique ou d'ordre économique enseignées dans une autre faculté.

Voilà pour l'organisation des études. Il est aisé de voir qu'elle a été dirigée tout entière par deux idées dominantes : la liberté et la coordination.

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Reste à parler de l'organisation administrative, et par là je me trouve ramené à mon début. Cette organisation qui vient d'aboutir à la reconnaissance, par la loi, des Universités, ne s'est pas produite à la façon des générations spontanées, s'il en existe. Elle a été plutôt le résultat d'une épigénèse organique, les appareils se créant peu à peu, peu à peu se coordonnant en vue d'une fin commune, à mesure que cette fin apparaissait plus nettement et que la réalisation s'en approchait. Dès le début, on s'était proposé, comme le disait Jules Ferry en 1883, de " constituer un jour des Universités rapprochant les enseignements les plus variés, pour qu'ils se prêtent un mutuel concours, gérant elles-mêmes leurs affaires, pénétrées de leurs devoirs et de leur valeur, s'inspirant des idées propres à chaque partie de la France dans la variété que comporte l'unité du pays, rivales des universités voisines, associant dans ces rivalités l'intérêt de leur



prospérité au désir qu'ont les grandes villes de faire mieux que les autres, de s'acquérir des mérites particuliers et des titres d'honneur." Ces Universités, on en a constitué peu à peu l'organisme, et quand la loi est intervenue pour leur donner un état civil authentique et une dotation, en fait elles existaient déjà.

Les Universités auxquelles on voulait aboutir devaient être des personnes civiles. Mais la matière don telles seraient faites était donnée; c'étaient les facultés. On ne pouvait songer à faire table rase du passé et à construire sur un plan idéal; on ne pouvait non plus songer à fondre ensemble les facultés, en effaçant entre elles toute distinction personnelle. Les Universités ne pouvaient donc être que des unions de facultés, des personnes collectives composées d'autres personnes, comme un être vivant est fait d'appareils vivant eux-mêmes et réalisant chacun une fonction particulière en vue de la fonction commune.

Un décret du 25 Juillet 1885 restaura la personnalité civile des facultés, tombée en désuétude, et leur reconnut l'aptitude à posséder et à recevoir. Partant de là, un autre décret daté du même jour, sans leur constituer encore un budget propre, leur rendait possible, sous la forme des fonds de concours, l'emploi des subventions qui pourraient leur venir des départements, des communes et des particuliers, et décidait qu'elles pourraient en faire usage pour la création de nouveaux enseignements, les dépenses des laboratoires et des bibliothèques et l'institution de bourses en faveur des étudiants. Comme il était à prévoir que des libéralités seraient faites indivises à plusieurs facultés d'une même ville, le même décret du 25 Juillet 1885 instituait, pour en régler la répartition, un conseil général des facultés. C'était la première ébauche de l'organe indispensable à l'existence des Universités futures.

Introduit incidemment par un document d'ordre financier et pour une fonction très limitée de même ordre, cet organe naissant allait bientôt se développer et prendre sa vraie place au centre même des facultés rapprochées. En même temps qu'il déterminait la composition du conseil général, le décret du 28 Décembre 1885 en régla les attributions; à la fonction purement financière de la première heure, il joignit d'autres fonctions, d'ordre scientifique, d'ordre scolaire, d'ordre administratif et d'ordre disciplinaire, organisant ainsi, en vue d'autres progrès et pour les justifier par l'expérience, un moyen de vie commune entre les facultés d'un même groupe.

Jusqu'ici l'intervention de la loi n'avait pas été nécessaire. Le pouvoir réglementaire avait suffi et on avait jugé prudent de s'en tenir, pour commencer, à ce qu'il permettait. Mais ce n'était là qu'un commencement. Pour aller plus loin, il fallait la loi. Aller plus loin dans cette voie, c'était, pour les facultés, obtenir un budget propre; pour la réunion des facultés, c'était devenir un corps, investi lui-même de la personnalité civile, et n'être plus une juxtaposition de personnes.

L'article 51 de la loi de finances du 17 Juillet 1889 créa les budgets des facultés et décida que les crédits ouverts au Ministre de l'Instruction publique pour le matériel de ces établissements

seraient versés à ces budgets sous forme de subventions. En exécution de ces dispositions, le décret du 22 Février 1890 organisa la budget et la comptabilité des facultés.

La même année, le Gouvernement crut le moment venu de constituer les Universités, et il déposa un projet de loi à cet effet au Sénat. D'après ce projet, fussent seuls devenus Universités, les groupes de facultés comprenant une faculté des sciences, une faculté des lettres, une faculté de droit, une faculté de médecine. Il y en eut en sept : Paris, Bordeaux, Lille, Lyon, Montpellier, Nancy et Toulouse. Quant aux autres qui n'avaient que trois et même, à Besançon et à Clermont, que deux facultés, le projet n'en parlait pas. On n'avait pas intention de les supprimer, mais il est incontestable que la constitution des grandes Universités, comme on disait alors, les eût amoindris. On eût été très probablement conduit à leur retirer le droit de conférer le doctorat, et il y eut eu ainsi deux ordres de facultés, les unes à fonction partielle, les autres à fonction totale et celles-là seules constituées en Universités.

Cette conception était conforme à la pensée constante des promoteurs des Universités. Dès la fin de l'Empire, la commission présidée par Guizot signalait comme cause principale de la faiblesse des facultés, leur trop grand nombre, leur dispersion, l'éparpillement entre elles de ressources insuffisantes, et proposait comme remède, la concentration des forces sur certains points du territoire, en petit nombre, et la constitution de quelques foyers scientifiques abondamment pourvus de tout ce qu'exige la science contemporaine. Et depuis lors, en mainte circonstance, les Ministres de l'Instruction publique avaient affirmé cet idéal. Mais ils n'y avaient pas toujours conformé leurs actes. De 1875 à 1885, au lieu de faire entre les facultés la sélection de celles où l'on pouvait voir déjà les membres des Universités futures, on avait poussé toutes les villes également à se mettre en dépense pour leurs facultés, quels qu'en fussent l'importance et l'avenir, et des villes de moyenne importance avaient ainsi beaucoup dépensé. Ces faits allaient se retourner contre le projet. On l'avait déposé au Sénat, avec l'espoir que le Sénat serait moins accessible que la Chambre des Députés aux considérations d'intérêt local. Il n'en fut rien. Les intérêts locaux qui se croyaient lésés par le projet, se coalisèrent contre lui ; à cette coalition, se joignirent les défiances des Écoles spéciales qui redoutaient la concurrence des Universités, et aussi les répugnances de certains républicains qui s'étaient persuadés que faire des Universités c'était revenir à une institution de l'ancien régime et tourner le dos à la Révolution. Le projet n'aboutit pas.

Mais de la brillante discussion à laquelle il donna lieu en 1892, s'était du moins dégagée cette idée, qu'il était bon de rapprocher les facultés et d'en faire, dans chaque centre d'études, un corps vivant d'une vie commune. On se hâta d'en profiter, l'article 71 de la loi de finances du 28 Avril 1893 créa dans chaque ressort académique le corps des facultés, le déclara personne civile et le pourvut d'un budget. Ce jour-là, virtuellement, les Universités étaient faites.



Une fois le corps des facultés créé par la loi, il appartenait au chef de l'État, en vertu de son pouvoir réglementaire, de l'organiser. Ce fut l'objet des deux décrets du 9 et du 10 Août 1893. Par le premier, rendu après avis du Conseil supérieur de l'Instruction publique, les attributions du conseil général des facultés étaient modifiées, élargies et adaptées à ses nouvelles fonctions, revision et complément nécessaire des dispositions de 1885, puisque désormais le conseil général était tout à la fois l'organe des intérêts communs des facultés réunies et le représentant de la personne nouvelle formée par leur union. Par le second, rendu en Conseil d'État, étaient déterminés le régime financier et la comptabilité des corps de facultés.

À ces corps ainsi pourvus, que manquait-il pour être des Universités au sens où le droit public français pouvait les admettre ? Trois choses seulement, mais trois choses essentielles.—Un nom d'abord, leur nom vrai, le seul possible, le seul en usage dans tous les pays civilisés, car ce n'était pas un nom que l'interminable périphrase sous le couvert de laquelle la loi de 1893 avait accepté leur venue : "le corps formé par la réunion de plusieurs facultés de l'État dans un même ressort académique."—En second lieu, la plénitude du pouvoir disciplinaire sur leurs maîtres et sur leurs élèves, car, de ce pouvoir, les décrets n'avaient pu leur faire dévolution que de la partie très limitée dont la loi ne disposait pas ; disciplinairement, leurs maîtres relevaient d'une autre juridiction, et leurs étudiants n'étaient leurs justiciables que pour certaines fautes et certaines infractions.—Enfin une dotation plus large, plus certaine, plus régulière que le produit des dons et legs et les subventions des départements, des communes et des particuliers, une dotation d'État proportionnée à leur population scolaire.

Sur ces trois points, la loi du 10 Juillet 1896 a complété l'œuvre poursuivie depuis 1885 en décidant : 1°, Que les corps de facultés prendraient le nom d'Universités ; 2°, que la juridiction disciplinaire et contentieuse serait transférée, en matière d'enseignement supérieur, des conseils académiques aux conseils des Universités ; 3°, qu'à dater du 1<sup>er</sup> Janvier 1898, l'État abandonnerait aux Universités le produit des droits d'études, d'inscription, de bibliothèque et de travaux pratiques payés par les élèves de leurs facultés.

Dans cette genèse des Universités se reconnaît l'action continue de certains principes directeurs. La fonction des Universités est une fonction scientifique. Du premier au dernier échelon des études, la science, la science à propager, la science à accroître, est la fin pour laquelle tout l'organisme enseignant doit être coordonné. Or, par essence, la recherche scientifique est libre ; elle ne peut être féconde que par la liberté. Elle ne reconnaît d'autres lois que les règles des méthodes, et ces règles, la puissance publique est inhabile à les tracer. D'autre part, en France, l'enseignement supérieur comme l'enseignement secondaire, comme l'enseignement primaire, s'il n'est plus un monopole, est une fonction de l'État. Les maîtres qui le donnent sont agents de l'État. Dès lors, ils forment un service public, différent sans doute d'autres services publics par ce qu'il a d'intellectuel et de



moral, mais soumis cependant, comme tout service public, à des règles édictées par la puissance publique.

Par suite, le problème à résoudre, dans la constitution graduelle des Universités, était de concilier cette indépendance et cette subordination. Pour cela, on a affranchi les Universités de toute entrave dans leur vie scientifique; elles sont maîtresses de leurs programmes, de leur organisation scientifique, sans autre obligation que de pourvoir aux enseignements nécessaires à la collation des grades conférés par l'État. Sous leur vie scientifique et pour l'accroître, on a placé la vie civile la plus large, la mieux assurée, sans autres restrictions, sans autre tutelle que celles qu'imposaient les lois générales du pays et le principe constitutionnel de la responsabilité ministérielle. Telles que la loi les a constituées, les Universités françaises ne sont pas des établissements d'utilité publique, indépendants de l'État et subventionnés par lui; elles sont des organes de l'État, mais des organes plus souples qu'autrefois, animés d'une vie propre et trouvant dans leur vie civile des moyens de mieux réaliser leur fonction scientifique.

Les décrets de Juillet dernier ont complété l'œuvre de la loi. Je ne les résumerai pas ici. Nombre de leurs dispositions relatives à la vie civile des Universités, au régime scolaire des étudiants, à leur discipline, seraient sans intérêt pour les lecteurs étrangers. J'indiquerai simplement dans quelle mesure ils assurent la vie scientifique des Universités.

Cette vie scientifique a pour organes primaires les maîtres de tout ordre. Dans les limites qui résultent de son titre, le maître est maître de son programme. Le temps n'est plus où, chaque année, l'administration contrôlait, revisait, remaniait, arrêtait les programmes des cours des facultés. Mais un maître n'est pas seul dans une faculté; une faculté n'est pas isolée dans une Université. Il importe "au bien des études et à l'intérêt des étudiants," suivant la formule du décret de 1885, que, dans une faculté d'abord, puis entre les facultés d'une même Université, tous les enseignements soient coordonnés en vue de ce bien et de cet intérêt. Seul le conseil de l'Université a compétence pour établir cette coordination. C'est donc lui qui statue souverainement "sur l'organisation générale des cours, conférences et exercices pratiques proposés pour chaque année scolaire par les facultés et écoles de l'Université."

Une seule obligation réglementaire lui est imposée, celle de comprendre dans cette organisation générale ce qui est nécessaire à l'obtention des grades établis par l'État. La "collation des grades" est une des fonctions pour lesquelles la puissance publique a créé des facultés. En constituant les facultés en Universités, la loi n'a pas supprimé cette fonction, et l'ayant maintenue, elle continue de pourvoir aux organes nécessaires. Mais là n'est pas la limite de la vie scientifique des Universités, pas plus que le grade d'État n'est la limite de la science. Au-delà, en dehors, avec leurs ressources propres, avec le concours de l'État lui-même, les Universités pourront, en toute liberté, pourvoir au reste.

Une des raisons invoquées en faveur de la création des

Universités était l'existence de rapports chaque jour plus nombreux et plus profonds entre les différentes sciences, l'apparition de sciences nouvelles, naissant indécises aux confins de sciences plus anciennes, d'où la nécessité, pour suivre le mouvement même de la science, d'établir dans l'organisme du haut enseignement non seulement des contacts, mais des anastomoses, par où se feraient une circulation et des échanges. On pourrait en donner des exemples tirés des mathématiques et des sciences physico-chimiques, de la physique et de la chimie, de celle-ci et de la biologie, de la biologie et des sciences d'ordre social, de l'histoire et du droit, de toutes les sciences positives et de la philosophie. Seul encore, le conseil de l'Université a compétence pour établir ces communications de faculté à faculté. C'est donc lui qui statue souverainement sur l'organisation et la réglementation des cours, conférences et exercices pratiques communs à plusieurs facultés. C'est encore dans l'intérêt de la science qu'on lui a remis de statuer sur la réglementation des cours libres. Enfin c'est toujours dans le même intérêt qu'on lui a attribué, sous réserve de l'approbation ministérielle, le droit d'instituer des "titres d'ordre exclusivement scientifique."

La question n'était pas nouvelle. Elle se trouvait posée en termes explicites dans l'exposé des motifs présenté au Sénat, le 22 Juillet 1890, à l'appui du premier projet de loi sur les Universités. "En France, y lisait-on, les grades conférés par les facultés sont des grades d'État. Ils ne donnent pas seulement un titre, mais un droit; celui qui les reçoit les reçoit pour en jouir avec tous les droits et privilèges qui y sont attachés par les lois et règlements. Aussi les épreuves en sont-elles les mêmes devant toutes les facultés. Qu'il y ait là une gêne à la liberté scientifique des Universités, nous ne le contestons pas. Mais serait-il possible, à l'heure présente, alors que nous n'avons encore des Universités que des espérances et non des certitudes, de changer de fond en comble notre système de grades d'État si profondément enraciné dans nos mœurs? Ce sera aux Universités elles-mêmes d'atténuer les effets de cette restriction nécessaire, par une entente vraiment scientifique de l'ensemble de leurs enseignements. Pour cela, toute latitude est donnée à leurs conseils. Ils pourront créer des certificats d'études et des diplômes, distincts des grades d'État, certificats et diplômes dépourvus de sanction légale, possédant seulement une valeur scientifique, mais qui seront des preuves d'un savoir acquis en pleine liberté d'études et qui vaudront d'autant plus en France, et surtout à l'étranger, que la science sera portée plus haut dans l'Université qui les délivrera."

Depuis lors, on s'est efforcé de mettre plus de science dans les grades, et partant plus de liberté dans les études. Le vieux système s'est assoupli; les programmes n'ont plus l'impérieuse rigidité de naguère; l'initiative des maîtres a un plus vaste champ; celle des étudiants, nulle autrefois, est aujourd'hui possible. Pourtant les grades restent les grades; ils sont des garanties déterminées d'ordre professionnel et comme tels ils ne comportent pas l'étude en pleine et absolue liberté. Il faut que



le médecin, à qui son diplôme donnera le droit d'exercer la médecine, justifie de certaines connaissances, sinon c'est un péril public, et justement les grades ont été institués à un moment où dans la société française il y avait beaucoup de ces périls publics et pour les conjurer.

Dans d'autres pays, des garanties sont également exigées pour l'exercice des professions où la science est requise ; mais la preuve du savoir demandé se fait non dans les Universités, mais devant des jurys d'État, et les Universités vaquent, en pleine liberté, à leur tâche scientifique. Il eut été impossible d'introduire et d'acclimater aujourd'hui pareil système en France. La loi y eut fait obstacle, et des mœurs presque séculaires eussent fait obstacle au changement de la loi. Dès lors, comme les grades d'État ne sont pas toute la science, et comme il importe de ne pas arrêter à leurs limites l'œuvre des Universités, le plus simple et le plus efficace a paru être d'autoriser les Universités à délivrer, en dehors des grades d'État, des titres scientifiques dont elles déterminent elles-mêmes les conditions et le contenu. Voici en quels termes le rapporteur du Conseil supérieur de l'Instruction publique, M. le professeur Lavis, a précisé et justifié cette importante innovation :

“ Nous ne voulons ni ne pouvons rompre avec le passé. Dans nos facultés, les étudiants se préparent à des professions, et nous décernons des grades qui confèrent le droit d'exercer ces professions. Ce sont les grades d'État. Les facultés ont une responsabilité envers l'État et envers le public ; elles doivent donc s'entourer de toute sorte de garanties, exiger des études antérieures constatées par des diplômes, puis un cours d'études complet et des séries graduées d'épreuves. Le régime du grade d'État ne peut être modifié.

“ Mais est-ce qu'il existe encore des professeurs dont toute l'activité soit absorbée par la préoccupation de préparer à des examens ? Non. Est-ce que les sciences juridiques, médicales, mathématiques, physiques, naturelles, philologiques, etc., ne sont pas étudiées en elles-mêmes et pour elles-mêmes ? Si, assurément. Et, d'autre part, ne peut-on imaginer des étudiants qui voudraient étudier une de ces sciences, sans rechercher un grade professionnel, et desquels il est inutile d'exiger soit les garanties antérieures, soit le cours complet d'études que l'on impose à ceux qui aspirent aux grades d'État ?

“ Voici un étudiant historien à la faculté des lettres qui veut étudier les institutions romaines ; il juge avec raison qu'il a besoin de recourir à l'enseignement de la faculté de droit, ou inversement un étudiant à la faculté de droit, qui veut étudier le droit romain et juge avec raison qu'il trouvera profit à travailler sous la direction de professeurs d'histoire romaine à la faculté des lettres. Voici un étudiant philosophe à la faculté des lettres qui, ne croyant point que l'étude de la philosophie se puisse abstraire des études scientifiques, voudra faire des études, suivant l'inclination de son esprit, de mathématiques ou de physiologie ? Ne peut-il aller prendre à la faculté des sciences ou à la faculté de médecine la partie d'enseignement qui lui convient ? Et l'on pourrait trouver



bien d'autres exemples que ceux-là. On dira : mais ces jeunes gens peuvent faire les études qui leur plaisent sans pour cela rechercher un diplôme. Sans doute, mais outre qu'il n'est pas prudent de supposer chez des jeunes gens un absolu désintéressement à l'endroit des honneurs et distinctions, lequel n'est pas commun chez les hommes mûrs, il faut bien penser que le diplôme serait un stimulant aux études. Ce diplôme ne pouvant être obtenu qu'après un travail, mémoire ou thèse, la production scientifique de nos Universités serait accrue, ce qui est de grande conséquence.

" Cherchons d'autres candidats possibles à un titre scientifique. Est-ce qu'il ne peut pas arriver, par les hasards de la vie, que quelqu'un, qui n'a point passé par la filière des études, soit capable de devenir un savant en physique, en chimie, en histoire naturelle, en géographie, etc. ? Un jeune homme qui n'a pu faire d'études régulières parce que les conditions de la vie ne le lui ont pas permis doit-il être à jamais exclu de nos Universités ? Nous ne pouvons lui donner un grade d'État ; pourquoi lui refuser, s'il le mérite, un titre scientifique ? Moralement, en avons-nous le droit ?

" Et puis, il y a partout en France des hommes qui aiment le travail intellectuel, par exemple qui étudient l'histoire de leur profession, celle de leur province, de leur ville, ou l'histoire naturelle d'une région ; il y a des ingénieurs, des officiers instruits. Ces hommes ne sont point pourvus des grades exigés des candidats aux doctorats. S'il s'en trouve quelques-uns qui veuillent un peu vivre de notre vie universitaire, travailler avec nous, sous notre direction, il y aura profit pour eux, pour nos Universités, qui doivent être des agents d'attraction vers la vie intellectuelle, et pour notre pays, où beaucoup de forces intellectuelles sont perdues faute d'être sollicitées et dirigées.

" L'institution d'un titre scientifique est utile encore au point de vue des étudiants étrangers. Cela est évident au premier coup d'œil puisque ces jeunes gens, à de rares exceptions près, n'ont point passé par les mêmes études que les Français, et que nous ne pouvons leur imposer évidemment le long séjour qu'il faudrait pour arriver d'échelon en échelon à notre doctorat d'État.

" En résumé, les Universités de l'État, héritières des facultés de l'État, continuent à préparer des étudiants pour les fonctions, et professions ; elles décernent, comme par le passé, des grades d'État qui donnent accès aux fonctions et professions. Mais, corps scientifiques, enseignant la science universelle, laquelle n'entre dans aucun cadre de programme ou d'examen, elles offrent l'initiation à la vie scientifique, sans distinction d'âge ni de nationalité, à tous ceux qui veulent étudier pour étudier. *Docet omnia* ; dans ce tout, chacun choisit sa petite part, maître ou étudiant. Quiconque est capable de recherches de critique, d'invention de vérité, doit pouvoir être étudiant d'Université et participer aux honneurs que l'Université décerne.

" Sans distinction de nationalité, disons-nous, et nous voici ramenés en terminant aux étudiants étrangers. Ce n'est point pour eux seuls que nous instituerons le nouveau diplôme ; c'est

pour nous d'abord, mais c'est aussi pour eux. Nous avons une clientèle déjà considérable d'étudiants étrangers. Or il faut que nous sachions que cette clientèle s'offre à nous de plusieurs pays. La rénovation de notre enseignement supérieur, attestée par l'activité singulièrement plus grande de la vie scientifique en France, n'a point échappé à l'attention des étrangers. Plusieurs manifestations de sympathie à notre égard se sont produites, très curieuses et très honorables pour nous. D'Écosse nous est venue, l'an dernier, la proposition de former un comité franco-écossais. La section écossaise de ce comité est venue nous faire, l'été dernier, une visite que nous allons lui rendre; plusieurs d'entre nous partiront demain pour Edimbourg. Un comité franco-américain s'est constitué dans les mêmes conditions sur proposition venue d'Amérique. Ces deux comités se proposent d'établir des relations intellectuelles et scientifiques entre les Universités d'Écosse et de France, entre les Universités de France et des États-Unis."

\* \* \* \* \*

Telle est, en ce qu'elle a de général, l'organisation des Universités françaises. Comme je l'ai dit en commençant, elle est la fin d'une étape et le début d'une autre. Jusqu'ici presque toutes les initiatives ont été prises par le pouvoir central. Désormais, c'est aux Universités de prouver, en agissant, qu'elles sont capables d'initiative. Elles peuvent être, dans un pays centralisé à l'excès, des organes de décentralisation intellectuelle et scientifique. Si elles y réussissaient, ce ne serait peut-être pas le moindre de leurs services.

L. LIARD.

*Paris, Dec. 1897.*

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## APPENDIX I.

## DÉCRET DU 21 JUILLET 1897

*portant règlement pour les Conseils des Universités.*TITRE I<sup>er</sup>.

## DE LA COMPOSITION DES CONSEILS.

ART. 1<sup>er</sup>. Le Conseil de chaque Université comprend :

1<sup>o</sup>. Le recteur de l'Académie, président ;

2<sup>o</sup>. Les doyens des facultés et le directeur de l'école supérieure de pharmacie ;

3<sup>o</sup>. Deux délégués de chaque faculté ou école, élus pour trois ans par l'assemblée de la faculté ou école parmi les professeurs titulaires ;

4<sup>o</sup>. Le directeur et un délégué, élus comme ci-dessus, de l'école de plein exercice ou de l'école préparatoire de médecine et de pharmacie du département où siège l'Université.

Les membres prévus au paragraphe précédent n'ont séance que pour les affaires d'ordre scientifique, scolaire ou disciplinaire.

ART. 2. L'élection des délégués a lieu au scrutin secret, à la majorité absolue des suffrages exprimés : si les deux premiers tours de scrutin ne donnent pas de résultat, la majorité relative suffit au troisième.

En cas de partage des voix, est élu au troisième tour le professeur le plus ancien dans la faculté ou école.

Toute contestation relative aux élections est portée devant le Conseil qui statue définitivement.

ART. 3. Le Conseil se réunit sur la convocation du président.

Le président est tenu de le convoquer sur la demande écrite du tiers des membres. La demande doit énoncer l'objet de la réunion.

ART. 4. Le Conseil élit chaque année un vice-président parmi ses membres.

Il nomme un secrétaire.

Il fait son règlement intérieur.

ART. 5. Sous l'autorité du Ministre de l'Instruction publique, le recteur instruit les affaires relatives à l'université et assure l'exécution des décisions du Conseil.

Il représente l'université en justice et dans les actes de la vie civile

Il a qualité, en ce qui concerne les biens de l'université, pour intenter toute action possessoire ou y défendre, agir en référé et faire tous actes conservatoires.



En cas d'absence ou d'empêchement, il est suppléé par le vice-président du Conseil.

ART. 6. Sous l'autorité du recteur, les doyens ou directeurs assurent, en ce qui concerne les facultés et écoles de l'Université, l'exécution des décisions du Conseil.

## TITRE II.

### DES ATTRIBUTIONS DES CONSEILS.

ART. 7. Le Conseil statue :

- 1°. Sur l'administration des biens de l'Université ;
- 2°. Sur l'exercice des actions en justice ;
- 3°. Sur la réglementation des cours libres ;
- 4°. Sur l'organisation et la réglementation des cours, conférences et exercices pratiques communs à plusieurs facultés ;
- 5°. Sur l'organisation générale des cours, conférences et exercices pratiques proposés pour chaque année scolaire par les facultés et écoles de l'Université.

Le tableau général des cours, conférences et exercices pratiques est arrêté par le Conseil au mois de juillet. Il doit comprendre les enseignements nécessaires à l'obtention des grades établis par l'État ;

- 6°. Sur l'institution d'œuvres dans l'intérêt des étudiants ;
- 7°. Sur la répartition, entre les étudiants des facultés et écoles de l'Université, des dispenses de droits prévues par les lois et règlements.
- 8°. Sur la répartition, dans le cours de l'année scolaire, des jours de vacances prévus à l'article 43, § 2, du décret du 28 décembre 1885.

ART. 8. Les décisions prises par le Conseil en vertu de l'article précédent sont définitives si, dans le délai d'un mois, elles n'ont pas été annulées pour excès de pouvoir ou pour violation d'une disposition légale ou réglementaire, par arrêté du Ministre de l'Instruction publique, après avis de la Section permanente du Conseil supérieur de l'Instruction publique.

ART. 9. Le Conseil délibère :

- 1°. Sur les acquisitions, aliénations et échanges des biens de l'Université ;
- 2°. Sur les baux d'une durée de plus de dix-huit ans ;
- 3°. Sur les emprunts ;
- 4°. Sur l'acceptation des dons et legs ;
- 5°. Sur les offres de subventions ;
- 6°. Sur les créations d'enseignements rétribués sur les fonds de l'Université ;
- 7°. Sur l'institution et la réglementation des titres prévus à l'article 15 du présent décret ;
- 8°. Sur les règlements relatifs aux dispenses des droits perçus par l'Université.

ART. 10. Les délibérations prises par le Conseil en vertu du précédent article ne sont mises à exécution qu'après l'approbation du Ministre

ART. 11. Les Conseil donne son avis

- 1°. Sur les budgets et comptes de l'Université ;
- 2°. Sur les budgets et comptes des facultés ;
- 3°. Sur les créations transformations ou suppressions des chaires rétribuées sur les fonds de l'État ;
- 4°. Sur les règlements relatifs aux services communs à plusieurs facultés.

Les services communs comprennent, outre la bibliothèque universitaire, les services qui, pour chaque Université, auront été déclarés tels par arrêté du Ministre, après avis du Conseil.

- 5°. Sur toutes les questions qui lui sont soumises par le Ministre ou par le recteur.

ART. 12. Tout membre du Conseil a le droit d'émettre des vœux sur les questions relatives à l'enseignement supérieur.

Les vœux sont remis par écrit au président ; il en est donné lecture au Conseil, et, dans la séance suivante, le Conseil décide s'il y a lieu de les prendre en considération.

ART. 13. Chaque Université est tenue d'affecter au service de la bibliothèque universitaire un crédit au moins égal au montant des droits de bibliothèque perçus par elle au cours de l'exercice.

Elle est également tenue de mettre à la disposition de chaque faculté ou école, pour les travaux pratiques et les laboratoires, des allocations au moins égales au montant des droits de travaux pratiques et de laboratoire versés au cours de l'exercice par les étudiants de chacune de ces facultés ou écoles.

Ces allocations, ainsi que les subventions qui pourront être accordées par l'État pour les mêmes objets, sont appliquées aux frais matériels des travaux pratiques et des laboratoires.

Les excédents peuvent être employés : 1° en rémunérations de chefs de travaux, de préparateurs et de garçons ; 2° en indemnités aux maîtres qui, en dehors de leur service réglementaire, ont dirigé des travaux pratiques ou un laboratoire.

Ces rémunérations et indemnités sont fixées par le recteur sur la proposition du doyen ou directeur.

ART 14. Par délégation du Ministre de l'Instruction publique le recteur nomme, sur la présentation du Conseil, et après avis de la faculté ou école intéressée, aux emplois de chargé de cours et de maître de conférences rétribués sur les fonds de l'Université.

Les professeurs titulaires rétribués sur les mêmes fonds sont nommés dans les formes prévues par les lois.

ART. 15. En dehors des grades établis par l'État, les Universités peuvent instituer des titres d'ordre exclusivement scientifique.

Ces titres ne confèrent aucun des droits et privilèges attachés aux grades par les lois et règlements, et ne peuvent, en aucun cas, être déclarés équivalents aux grades.

Les études et les examens qui en déterminent la collation sont l'objet d'un règlement délibéré par le Conseil de l'Université et soumis à la section permanente du Conseil supérieur de l'Instruction publique.

Les diplômes sont délivrés, au nom de l'Université, par le président du Conseil, en des formes différentes des formes adoptées pour les diplômes délivrés par le Gouvernement.

### TITRE III.

#### DE LA PROCÉDURE DEVANT LE CONSEIL.

ART. 16. Lors de sa première réunion, le Conseil de l'Université nomme, au scrutin secret, pour la durée de ses pouvoirs, une commission des affaires contentieuses et disciplinaires.

Cette commission comprend au moins un membre de chacune des facultés et écoles représentées au Conseil.

ART. 17. L'exercice de l'action disciplinaire appartient au recteur.

Il peut déléguer un membre du Conseil pour procéder à l'information.

ART. 18. La commission est saisie directement par le recteur des affaires sur lesquelles le Conseil doit statuer.

Elle les instruit par tous les moyens propres à l'éclairer et elle en fait rapport.

Les parties doivent toujours être appelées par elles et entendues si elles se présentent.

ART. 19. La citation à se présenter devant le Conseil est adressée par le recteur, sous pli recommandé, trois jours au moins avant la séance du Conseil.

Elle avise l'intéressé du jour et de l'heure fixés pour le jugement, lui fait connaître qu'il a le droit de se défendre soit de vive voix, soit par mémoire écrit, et, dans les cas prévus par la loi, qu'il peut se faire assister d'un défenseur.

Elle l'informe que le rapport de la commission et les pièces du dossier seront à sa disposition, au secrétariat du Conseil, un jour franc avant le jour fixé pour le jugement.

ART. 20. Les décisions sont rendues dans les formes suivantes :  
Il est donné lecture du rapport de la commission.

Les parties sont ensuite introduites, si elles se présentent, et entendues en leurs observations.

Si elles ne se présentent pas, et qu'elles aient adressé des mémoires écrits, il en est donné lecture après le rapport de la commission.

Quand les parties se sont retirées, le président met l'affaire en délibéré, et le Conseil statue au scrutin secret.

Le Conseil peut toujours ordonner un supplément d'instruction.

ART. 21. La présence de la moitié plus un des membres du Conseil est nécessaire pour la validité de la décision.

Les décisions sont rendues à la majorité des membres présents, sauf dans le cas où les lois exigent la majorité des deux tiers.

En cas de partage, si la matière est disciplinaire, l'avis favorable à l'inculpé prévaut.

Si la matière est contentieuse, il en est délibéré à nouveau après convocation des membres qui n'auraient pas assisté à la première délibération.

En cas de nouveau partage, la voix du président est prépondérante.



ART. 22. La décision est notifiée par le recteur sous pli recommandé, dans le délai de huit jours, au domicile de la partie.

Quand il s'agit d'un étudiant, elle est en outre notifiée au domicile de ses parents ou tuteur.

Avis en est donné au Ministre.

ART. 23. Dans les cas où appel de la décision peut être interjeté devant le Conseil supérieur de l'Instruction publique, avis en est joint à la notification, avec indication du délai dans lequel l'appel peut être formé.

ART. 24. Le délai de quinze jours pendant lequel l'appel peut être formé court à dater du jour de la notification de la décision.

ART. 25. L'appel est suspensif, sauf dans le cas où le Conseil a ordonné l'exécution provisoire de sa décision.

ART. 26. Les déclarations d'appel sont reçues et enregistrées au secrétariat du Conseil de l'Université. Il en est donné récépissé. Elles sont transmises sans délai au Ministre.

L'appel du recteur est formé par un arrêté notifié aux intéressés. Ampliation en est adressée, avec les pièces de l'affaire, au Ministre.

ART. 27. Sont adjoints au Conseil, pour le jugement des affaires contentieuses et disciplinaires intéressant une école d'enseignement supérieur située dans le ressort académique, en dehors du siège de l'Université, le directeur de cette école et un professeur titulaire élu dans les conditions déterminées à l'article 1<sup>er</sup> du présent décret.

## TITRE IV.

### DISPOSITIONS DIVERSES.

ART. 28. Le Conseil adresse chaque année au Ministre un rapport sur les établissements de l'Université et sur les améliorations qui peuvent y être introduites.

ART. 29. Les maires de villes qui allouent des subventions à l'Université ou aux facultés, et, dans le même cas, les présidents des conseils généraux des départements, les présidents des établissements publics ou d'utilité publique et des associations formées dans le dessein de favoriser le développement des Universités, ont séance au Conseil pour l'examen du rapport annuel prévu à l'article précédent.

A Paris, ce droit appartient au Préfet de la Seine et à un délégué du Conseil municipal.

La convocation peut être étendue, par décision du Conseil, aux bienfaiteurs de l'Université.

# APPENDIX II.

## STATISTIQUE D'ÉTUDIANTS EN 1896-97.

F. de nationalité française.

E. de nationalité Étrangère.

	PARIS.						AIX-MARSEILLE.						BESANÇON.					
	Etudiants hommes.			Etudiants femmes.			Etudiants hommes.			Etudiants femmes.			Etudiants hommes.			Etudiants femmes.		
	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.
Théologie protestante	57	1	58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Droit -	2477	135	2612	1	—	1	2613	52	277	1	—	1	278	—	—	—	—	—
Médecine -	3388	548	3936	26	109	135	4071	7	122	1	—	1	123	37	—	—	—	37
Sciences -	1050	70	1120	21	14	35	1155	4	194	—	—	—	194	45	—	—	—	45
Lettres -	1372	91	1463	215	76	291	1754	1	55	2	—	2	57	68	—	6	—	74
Pharmacie -	1336	21	1357	5	2	7	1364	—	95	1	—	1	96	13	—	—	—	13
	9680	866	10546	268	201	469	11015	64	743	5	—	5	748	163	—	6	—	169

	BORDEAUX.						CAEN.						CLERMONT.						DIJON.					
	Etudiants hommes.			Etudiants femmes.			Etudiants hommes.			Etudiants femmes.			Etudiants hommes.			Etudiants femmes.			Etudiants hommes.			Etudiants femmes.		
	F.		E.		Total.		F.		E.		Total.		F.		E.		Total.		F.		E.		Total.	
	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.
Théologie protestante	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Droit .....	721	1	722	—	—	722	322	6	328	—	—	328	—	—	—	—	—	—	375	1	376	—	1	377
Médecine ...	701	21	722	6	2	8	36	—	36	—	—	36	50	—	50	—	—	50	47	—	47	—	—	47
Sciences .....	268	12	280	8	—	8	50	—	50	—	—	50	49	—	49	—	—	49	110	—	110	—	—	110
Lettres .....	153	1	154	15	—	15	122	—	122	—	2	124	78	—	78	2	2	80	59	1	60	—	—	60
Pharmacie ...	248	2	250	1	—	1	44	—	44	—	—	44	27	—	27	—	—	27	40	—	40	—	—	40
	2091	37	2128	30	2	32	574	6	580	—	2	582	204	—	204	2	2	206	631	2	633	—	1	634



	GRENOBLE.						LILLE.						LYON.						MONTPELLIER.					
	Etudiants hommes.			Etudiants femmes.			Etudiants hommes.			Etudiants femmes.			Etudiants hommes.			Etudiants femmes.			Etudiants hommes.			Etudiants femmes.		
	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.
Théologie protestante	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Droit .....	261	6	267	—	—	267	343	1	344	1	1	2	436	9	445	—	—	—	353	6	359	—	—	359
Médecine ...	28	—	28	—	—	28	292	18	310	1	1	2	936	49	985	2	5	7	377	77	454	—	43	497
Sciences .....	83	—	83	—	—	83	189	3	192	1	1	2	309	17	326	4	1	5	131	40	171	1	25	197
Lettres .....	97	1	98	23	—	121	179	—	179	43	—	43	162	—	162	—	—	—	87	5	92	6	1	99
Pharmacie...	41	—	41	—	—	41	150	—	150	1	—	1	267	—	267	1	—	1	189	1	190	—	—	190
	510	7	517	23	—	540	1153	22	1175	47	2	49	2110	75	2185	7	6	13	1137	129	1266	7	69	1342

	NANCY.						POITIERS.						RENNES.						TOULOUSE.						
	Etudiants hommes.			Etudiantes femmes.			Etudiants hommes.			Etudiantes femmes.			Etudiants hommes.			Etudiantes femmes.			Etudiants hommes.			Etudiantes femmes.			
	Total.		Total.	Total.		Total.	Total.		Total.	Total.		Total.	Total.		Total.	Total.		Total.	Total.		Total.	Total.		Total.	
	F.	E.		F.	E.		F.	E.		F.	E.		F.	E.		F.	E.		F.	E.		F.	E.		F.
		F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.	F.	E.	Total.
Théologie protestante	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	42	1	43	—	—	—	—	—	43
Droit.....	324	10	334	—	—	334	492	—	—	492	—	—	523	2	525	—	—	—	848	17	865	—	—	—	865
Médecine.....	223	59	282	16	16	298	30	—	—	30	—	—	127	—	127	—	—	—	366	15	381	—	1	1	382
Sciences.....	202	12	214	7	7	221	116	—	—	116	—	—	187	—	187	2	2	189	193	1	194	—	—	—	194
Lettres.....	102	6	108	3	6	114	112	—	—	112	—	—	122	—	122	2	1	125	174	—	174	10	10	10	184
Pharmacie....	40	6	46	—	—	46	27	—	—	27	—	—	80	—	80	—	—	80	139	—	139	1	1	1	140
	891	93	984	3	26	1013	777	—	—	777	—	—	1039	2	1041	4	1	1046	1762	34	1796	11	1	12	1808

ÉCOLES DE MÉDECINE EXTRA-CENTRALES.

	Etudiants hommes.			Etudiants femmes.			Total.
	F.	É.	Total.	F.	É.	Total.	
Amiens -	58	1	59	—	—	—	59
Angers -	125	—	125	—	—	—	125
Limoges -	124	—	124	2	—	2	126
Nantes -	303	1	304	2	—	2	306
Reims -	72	1	73	2	—	2	75
Rouen -	143	—	143	1	—	1	144
Tours -	52	—	52	2	—	2	54
	877	3	880	9	—	9	889

ÉCOLES D'ALGER.

	Etudiants hommes.			Etudiants femmes.			Total.
	F.	É.	Total.	F.	É.	Total.	
Droit -	200	—	200	—	—	—	200
Médecine -	132	5	137	—	—	—	137
Sciences -	39	—	39	1	—	1	40
Lettres -	20	—	20	—	—	—	20
Pharmacie -	74	—	74	—	—	—	74
	555	5	560	1	—	1	561



## ANNÉE SCOLAIRE 1896-97.

## RÉCAPITULATION.

	ETUDIANTS HOMMES.			ETUDIANTS FEMMES.			ENSEMBLE.
	França.	Étrangers.	Total.	França.	Étrangers.	Total.	
Théologie protestante ...	99	2	101	—	—	—	101
Droit ...	7700	246	7946	3	1	4	7950
Médecine ...	6754	794	7548	35	177	212	7760
Sciences ...	3172	159	3331	37	48	85	3416
Lettres ...	2941	106	3047	327	83	410	3457
Pharmacie ...	2736	30	2766	10	2	12	2778
<b>Totaux (Universités)</b> ...	23402	1337	24739	412	311	723	25462
Ecoles de médecine extra-centrales ...	877	3	880	9	—	9	889
Ecoles d'Alger ...	555	5	560	1	—	1	561
	24834	1345	26179	422	311	733	26912

UNIVERSITÉS

## THE FRENCH UNIVERSITIES.

BEING A TRANSLATION OF MONSIEUR LOUIS LIARD'S ARTICLE ON  
LES UNIVERSITÉS FRANÇAISES.

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The fifteen Faculties established within the French Republic have been made into Universities by an Act, dated July 10th, 1896. They are, Paris, Bordeaux, Lille, Lyon, Montpellier, Nancy, Toulouse, Aix-Marseille, Caen, Dijon, Grenoble, Poitiers, Rennes, Besançon and Clermont. Their functions in reference to learning, their relation to schools, their civil and financial organisation have been settled by six administrative Decrees, dated, three on July 21st, two on July 22nd, and one on July 31st, 1897. This Act and these Decrees mark an epoch in the history of higher education in France. They determine the end of one stage and the beginning of another. They form the termination of a policy which for more than twenty years has been consistently and firmly carried out.

For it must not be supposed that French Universities have sprung, as a new institution, from the Act of 1896. They have been gradually shaping themselves through long years, bit by bit, and in this case—fact possibly unique in French legislation—the law has not called into existence, but has only intervened at the close to confirm and recognise what the growth of experience had already brought about. So in order to understand this movement, it is not sufficient to read the words of the Act, or of the Decrees in which it is formulated, nor yet to realise the theoretic ideas on which it has been based. The real causes are to be sought in the past history of France, and of the Universities.

The French Monarchy possessed, at the time of the Revolution, twenty-one universities. All of them were feeble, some in a state of almost complete collapse. The vigour which had animated them during the Middle Ages had gradually died away. Shut up in their traditional formalism, they had been unable or unwilling to accept the new learning; and the whole philosophic and scientific spirit of the eighteenth century had grown and borne fruit outside their walls. So it is not surprising that the Revolution, produced by this very spirit, had suppressed them or allowed them to disappear. In their place Mirabeau, Talleyrand, and Condorcet endeavoured to establish large universal schools, including in their organisation all that the human mind originates, verifies, or discovers in its search after Truth and Beauty. But this project, which, long afterwards, during the last days of the Revolution resulted in the establishment of the Institute of France, remained

a dead letter. The necessities of the times, want of money, and the pressure of practical questions caused the substitution of special schools in place of these universal schools, which should have been types of the modern university, built for the pursuit of learning, and inspired by the same motive. These special schools were intended to train for the public services, and for certain professions. They were, the Polytechnic, the Normal School and Schools of Medicine and Law, where only fragments of learning penetrated, and these merely as a means to some definite end. The only homes of pure learning were the College of France—a legacy from the former monarchy, which had remained intact in the turmoil—the Museum of Natural History, established by the Convention in the *Jardin du Roi*, and the Institute, set up by the Convention itself, which carried out the ideas of the Revolution as to the universality and fundamental unity of all knowledge, but which was not, and could not be, a school of learning.

The word University reappeared under the First Empire, but in the singular, not in the plural, and in a sense quite different from that which it had had under the former *régime*; a meaning which was becoming more and more general elsewhere in Europe.

Napoleon, with his tremendous genius for centralisation, wanted a single Body to control education, just as there was one Republic, single and indivisible. In this Body was to be centred a vast administration controlled by one chief, and including all stages of education. This was the Imperial University, the one fount of national instruction, which its founder tried, without success, to turn into an instrument of general educational administration.

In a University so conceived and so constructed there could be no place for Universities supplying the real needs of higher learning, and possessing the independence which the pursuit of knowledge demands. They were content to change the names of the schools of Law and Medicine which then existed. They were called Faculties, without, however, any change of aim or of organisation. They remained professional schools with the duty of teaching and labelling the doctors, lawyers, and magistrates which society required. By the side of these Faculties, but without an organic connection, were established, in even too large numbers, Faculties of Science and Faculties of Arts, the principal duty of which was, not teaching or the pursuit of learning, but the distribution of degrees instituted by the State, conferred by the State, and demanded by it as a guarantee of efficiency for admission to certain professions and public offices.

In this state matters continued, without any modification of detail, throughout the periods of the Restoration, the Government of July, and the Second Empire. This must not be taken to mean that the teaching of the French Faculties, scattered and fragmentary as they were, has been without usefulness and brilliancy. If any one asserts this, it will be sufficient to recall the lectures of Guizot, Villemain, and Cousin under the Restoration, without mentioning many other eminent professors who distinguished themselves at a later period. But the very



brilliance of these public lectures, addressed from the professor's chair as from a public platform, to what is called in France the great public, is a sufficient proof that outside the Faculties of Medicine and Law (the definite professional aim of which ensured them a sufficiency of students) the Faculties of Arts and Sciences had no regular students and were not schools of learning. But this does not imply that during this long period French Science has been at a standstill. To refute such a statement it is enough to mention, among many others, the names of Cauchy, Poisson, Ampère, Burnouf, Abel Rémusat, Champollion, Regnault, Balard, Wurtz, Laënnec, Magendie, Claude Bernard and Pasteur. But their discoveries are the results of genius—and genius will always find means to express itself, even under the most unfavourable conditions. The truth is that during the whole of this period France has had an excellent general staff of discoverers and originators, but it has not had a sufficient roll of officers and under-officers of Science. And this is the result of the defective organisation of its higher education, and of the indifference of the nation and the public authorities.

Still it must not be supposed that during this time no idea of a better organisation was conceived. At the very beginning of the Government of July, Guizot had proposed to create in France a number of Universities, and to make of them centres of vitality capable of re-animating the intellectual side of life, the decay of which he deplored. Some years later Cousin, at that time Minister of Public Instruction, would seem to have advocated the same scheme. But both of them were prevented from carrying out their proposals, owing to political changes; and, it must also be stated, owing to the indifference of the nation. It was not until quite the end of the Second Empire, after V. Duruy had established *l'École des Hautes-Études*, that, in response to the demand of French men of learning familiar with the progress made in other countries, some feeling was aroused in favour of higher education, and its present imperfections and poverty of equipment were denounced. A Commission, presided over by Guizot drew up a scheme in reference to the freedom of this grade of education, and at the same time suggested certain reforms, which seemed likely to give renewed vigour to the Faculties established by the State.

This movement which was interrupted by the war of 1870, was immediately afterwards renewed with unusual energy. From this moment it was an axiom recognised, if not by the nation at large, at any rate by most of those who devote themselves to intellectual work, and who trace back results to their causes, that the reform of Higher Education was imperative. And they recognised that this reform was one of the elements, and by no means the least important, in the restoration of the country, and that it formed an integral part of the scheme of national defence. From intellectual and scientific circles this opinion spread to politicians, and, from the moment when the Republican party succeeded to the government, the reform of Higher Education was given a place in the Republican programme. No doubt this opinion was not expressed as clearly and as broadly as in the phrase,

"Secular primary education, free and compulsory;" but with sufficient clearness and with sufficient persistence to induce each successive Minister of Public Instruction, from 1875 to 1896, to deem it his duty to add one stone to the structure, and to support the men of learning who have been the pioneers of the movement.

Under what form could and should this reform of Higher Education take place? There are but two forms for the advanced teaching of the sciences and the arts. There are special schools where a definite section of knowledge is taught and investigated, and Universities in which all branches of knowledge are to be found, with their various means of pursuit, organically grouped and co-ordinated, as they would be in an encyclopædic human brain. The French Faculties, standing in juxtaposition, but without communication and connection with one another, have been, in spite of their names, Special Schools. They were judged by their results, and these results have proved the condemnation of the system under which they have languished. The second form remains, the University system. It alone was possible. And the results produced by it in other countries were already known.

It would not, however, be correct to say that the men whose object in the reform of Higher Education was the establishment of Universities were inspired by the idea of imitation. Universities—both the name and the fact—are of French origin. Equally of French origin is the idea of the correlation of the various branches of knowledge which modern Universities in every land endeavour to bring about. This was the idea of our Encyclopædists of the eighteenth century, and it is from them, incontestably, that Auguste Comte draws his inspiration. This conception of the functions of a university made its appearance at that period, at first distant and faint, then gradually nearer and more distinct, as the means for carrying out this conception were formulated, and put into practice, and as the goal to which all effort was to be directed, was more clearly seen. This has been the motive cause, because it has been the final cause of the whole movement of reform.

The undertaking involved efforts of many sorts and kinds. A start had to be made in several quarters at the same time. Scattered supporters had to be brought together into the front line of progress; and yet it was necessary to advance prudently, not to shock any prejudice, and to make each forward step show the need of further movement.

It is a difficult matter now to realise the poverty of equipment which characterised the French Faculties at the end of the Second Empire. Their provision was often disgraceful, never sufficient. Efforts were made to construct buildings fitting for their needs; and in this costly work, which is scarcely yet complete, the State met with the liberal co-operation of towns in all parts. Expenses under this head amounted to hundreds of millions of francs; and the towns provided nearly half the sum.

The want of buildings was no greater than the want of scientific apparatus. The latter will soon be complete, and will bear comparison with that of any other European country.

Everywhere there was a want of sufficient teachers. In 1874, I was



a professor in the Faculty of Arts at Bordeaux. There were six of us altogether. A professor of Philosophy, of History and Geography, of Greek Language and Literature, of Latin Language and Literature, of French Literature and of Foreign Literature; and yet we were by no means the worst off among the Faculties. To-day the Faculty of Arts of the University of Bordeaux includes the following sections:—Philosophy, history of philosophy, sociology, pedagogy, Greek language, Greek literature, Latin language, Latin literature, French literature, Romance languages, literature *du midi*, German language and literature, English language and literature, archæology and antiquities, ancient history, modern and contemporary history, history of the middle ages, history of the south-west of France, general geography, and colonial geography. Compare these two lists, and the development is apparent. And there has been a like development, in different proportions, in the other Faculties of Art, in all the Faculties of Science, and in the Faculties of Law and of Medicine.

Deprived of the essential means of teaching—for the word “deprived” may fairly be used when there is only one professor for all branches of history and geography, one only for all branches of natural science, as was the case in the Faculties of Art and of Science, Paris only excepted—higher education also lacked the necessary instruments for its work. There were no libraries, few museums beyond those of natural history, which the towns placed at the disposal of the Faculties. Grants voted for the expenses of the course and for laboratory work were ridiculously small. To-day instead of this poverty, the Faculties are, not indeed wealthy, but comfortably provided for. Two figures suffice to show the striking difference between then and now. In 1870, the last year of the Second Empire, the amount voted by the State to the Faculties was 4,245,521 francs. In 1897, the State contributed to the ordinary expenses of the universities the sum of 12,905,678 francs; *i.e.*, an increase of 8,660,157 francs. And this is not all. Thanks to the arrangements which have given them an independent existence, of which I shall speak lower down, Faculties and Universities have at their complete disposal an annual sum of 500,000 francs from income and grants. And after the 1st January, 1898, in accordance with Article 4 of the Act of July 10th, 1896, the Universities will collect for their own use the fees for lectures and for enrolment, for the use of library and laboratories and of the other facilities for practical work, which have hitherto gone into the Public Treasury. This will amount to about 1,800,000 francs, and as the State will only diminish its grant by 400,000 francs, there will be a profit to the universities of 1,400,000 francs.

It is necessary, in order that one day there may be genuine universities, to modify the existing conditions, as well as the existing habits and attitude of mind shown in the Faculties. The spirit of experiment must be introduced into the Faculty of Medicine. In Law, the realistic spirit of history and of the economic sciences must be added to the abstract and deductive judicial mind. The critical spirit and the spirit of investigation must be developed in



the Faculties of Science and of Arts. The public lectures held in so great honour, must give way to genuine teaching; and for this purpose, students must be found for those Faculties which have, at present, none or very few. Here lies the most delicate, the most difficult, and the most gradual part of the task. It can only be performed by the sympathy and help of individuals, or by the action of the professors. This sympathy and help has been found, this action has been forthcoming, and it is possible to-day to say that in spite of some remaining hesitation, inevitable so long as the revolution in progress is not finally carried out, the French Universities are fully conscious of their three-fold function, or, rather of the three stages of their functions in regard to learning. The first stage is to be a centre of general culture, the second to prepare for professions and careers, and, at the top, for picked students, to give opportunity for learned research.

It is these ideas which have inspired the new regulations for examinations that have been submitted to the Faculties. The best programme for a University is not to have one. The best regulations for professors is full liberty to teach, and for students full liberty to choose, at their own risk, out of the varied teaching of the university, according to their tastes, their aptitudes and their plans for the future. In France, such a state of affairs is impossible, at least for many long years. And this is the reason.

In France the degrees conferred by the Faculties are State degrees, and not, as elsewhere, purely academic. The State instituted them at the beginning of the century, as public guarantees of efficiency; and, as they are demanded as qualification for certain positions and professions, they carry with them certain rights and privileges. No one can exercise the profession of medicine in France, unless he is a doctor of medicine; no one can be a chemist unless he possesses a special diploma. No one can be a barrister or magistrate unless he has taken a degree in Law. But a State degree implies a course of studies, prescribed by the State. As the certificate is a public guarantee of capacity, the State must say of what capacity it is the guarantee. Subserviency, and consequent barrenness of higher education, might possibly result from this doctrine—a doctrine which public feeling in France will scarcely allow to be altered. So while respecting this doctrine, it must be made more elastic, and while degrees maintain their present value as guarantees, all freedom possible within the limits must be introduced into the examinations, and, consequently, into the course of study which leads to them. At the same time degrees must be reorganised in such a way that they may follow the progress of learning instead of arresting it.

There are three degrees in France: the *baccalauréat*, the *licence*, and the *doctorat*. I shall say nothing further about the first. In the Faculties of Arts and of Science, it is the termination of studies pursued in secondary schools (*lycées* and *collèges*); in the Faculty of Medicine it no longer exists, any more than the *licence*; in Law, it is incorporated with the *licence*. I shall then limit my remarks to the two latter, the *licence* and the *doctorat*.

In the Faculty of Arts the *licence* used to consist of the following examination: a thesis in French and in Latin; Latin verses and a Greek essay; further a *vivâ voce* examination consisting of the translation and explanation of pieces of French, Latin, and Greek. There was no history, no philosophy, no literature of other countries either compulsory or optional. It was then an examination in pure classics, work properly belonging to secondary education. The first reform consisted in introducing into the examination for the degree of *licence* subjects which had been previously excluded. The examination was divided into two parts, ordinary and special. The ordinary examination consisted of two theses and the three translations as before; the special examination offered a choice to candidates, among the following subjects:—A Greek essay and an essay on grammar and versification, essays and dissertations on history, or on philosophy, essays in modern languages with translations and comments on English or German writers. These regulations, still sufficiently rigid, have been recently made more elastic. More freedom of choice is now given, both to professors and students; at the same time the unity which examinations for State degrees must have has been maintained. Formerly the list of authors to be read was drawn up for each Faculty by the Minister of Public Instruction. Now each Faculty draws up every two years a list of authors on which its professors will lecture for the *licence*. Formerly only subjects included in the syllabus could be offered for examination. Now for one of the written examinations, each candidate may choose any subject taught in the Faculty. Finally, in this same examination, instead of an essay on a given subject, done in a given time, a candidate may substitute an essay written at leisure, on a subject chosen by himself and approved by the professors of the Faculty.

The degree of Doctor of Arts has remained as it was. Indeed, it needed no change. Two theses, one in French, the other in Latin, are prepared by the candidate on two subjects of his own choosing, and he has to maintain his propositions in public. For many years these have been tests of real learning, on a high plane, and a number of the theses maintained before the Faculties are genuine contributions to knowledge.

It is the same in the degree of Doctor of Science. The two theses, which have to be written and maintained, in order to gain it, are always pieces of important work, very often they are pieces of original research, and some have become standard works. As in the degree of Doctor of Arts, this state of affairs is to be maintained, and not to be changed. In the degree of *licence* in science, certain modifications seemed necessary. There were three of these degrees: Mathematical Sciences, Physical Science, Natural Science. Each one included three written tests, and *vivâ voce* and practical work in three subjects. Differential and integral calculus formed the first, together with theoretical mechanics and astronomy; physics, chemistry and mineralogy the second; and the third zoology, botany and geology. The result was that certain subjects taught in the Faculty, for instance, higher algebra, physiology, biological chemistry, etc., could not be offered for examina-



tion. Another result was that candidates could only choose between the three groups of subjects; when once a group was chosen the work of the syllabus was compulsory, whatever the candidate's natural aptitude or taste. To meet this objection the separation of the groups has been abolished, and a candidate has full liberty of choice. Henceforward every Faculty of Science hands to a candidate, after examination, a certificate of advanced studies. These certificates correspond to the subjects taught in that Faculty, for every Faculty does not teach the same number of subjects. For instance, physiology is taught at Lyon and at Paris, but not at Nancy or Lille; the chemistry of manufactures has a professor and laboratory at Lyon and at Nancy, but not at Poitiers or Dijon. Among these subjects the student will choose those he wishes to study; and when he has obtained three certificates of advanced studies, either from the same or from different Faculties, he will receive in exchange the diploma of the *licence*. This alteration gives him complete freedom. Though the change was only made two years ago, happy results are already visible.

Important changes have also been made in the regulations affecting studies and examinations for the degrees of *licence* and doctor in the Faculties of Law. Formerly the course of study was merely judicial and professional, and only included Roman law, French civil law, penal law and administrative procedure and law. The history of law, constitutional law, the principles of public and international law, and the economic sciences were gradually added. Now the course of study is arranged as follows:—

The first degree is the *licence*, which requires three years, and is common to all students. The first year includes a general view of the judicial institutions of Rome, treated in order of their historical development, French civil law, and the general history of French law, the elements of French constitutional law, and political economy. In the second year: the subject matter of Roman law, as it relates particularly to French law, criminal law, administrative law and the principles of public international law. In the third year: civil and commercial law, private international law, civil procedure and financial legislation. The second degree is that of doctor, the preparations for which, lasts two years and is divided into two branches: doctor of judicial science, and doctor of political and economic science. The examination for doctor in law is not, like those of doctors in arts or science, entirely free. The candidate must prepare and maintain a thesis on the subject he has chosen; but this is not the only test; and before gaining his degree, he must have passed two examinations in compulsory subjects. These are for a doctor in judicial science; Roman law with a disputation on the Pandects, two sections of French civil law, chosen by the candidate, history of French law and, at the candidate's option, criminal law, the jurisdiction and procedure of the courts in administrative law, or comparative civil law. The candidate in political and economic science must offer the history of public French law, the principles of public law, comparative constitutional law and, at his option, administrative or international public law; political economy



and the history of economic doctrines, French financial legislation and the science of finance, and, at the candidate's option, industrial legislation and economy, rural legislation and economy or colonial legislation and economy.

The regulations concerning the course of studies and the examination for the degree of Doctor of Medicine were subjected to slight alterations in 1894, and now demand a four years' course. This, indeed, is not found sufficient, and is usually followed by one or several additional years of study. During the course and at its completion are five examinations: for the first, anatomy, excluding topographical anatomy, and a practical examination in dissection; for the second, physiology, including physical and biological chemistry; for the third surgery, including topographical anatomy, external pathology, midwifery, general pathology (animal and vegetable parasites and microbes), internal pathology, with a practical examination in pathological anatomy; for the fourth, therapeutics, hygiene, forensic medicine, the *materia medica*, pharmacology, with applied physical and natural sciences; for the fifth, theoretical and practical examination in clinical medicine, clinical surgery, and clinical obstetrics. After the five examinations the candidate must publicly maintain a thesis chosen by himself from the group of medical sciences.

But all this has only meant the readjusting of the old regulations, which are no longer in accordance with the present state of science. The real reform of the medical Faculties has come from without, from the science Faculties. Up to 1894 admission to schools of medicine could be gained by any candidate who had merely passed the *baccalauréat* in a secondary school. Such a candidate has no sufficient grounding in science. All he knew of chemistry and physics he had studied theoretically in the ordinary school course, without any experimental work. An attempt was made to remedy the fault during his first year in a medical school, but at the expense of his medical studies. In 1894, after the proposed new regulations had been tried at Toulouse for three years it was resolved that the medical student should pass through the Faculty of Science before being admitted to his medical studies. He studies science for a year, and during that time receives theoretical and practical instruction in physics, chemistry, zoology, and botany. Practical work, compulsory on all students, must be taken every day in addition to the professor's lectures. The examinations following this course include both theoretical and practical work. Henceforward every student on his entrance into a school of medicine will know enough physics, chemistry, zoology, and botany to begin his medical studies with profit. He can make a chemical analysis, take a temperature and an electric measurement. He knows how to handle a microscope, and prepare, examine, and sketch microscopic specimens.

The immediate advantages of this arrangement are obvious. There is another advantage more pertinent to the inner life of the faculty, which I must point out. I have already said that even in 1885 the French Faculties had existed side by side without connection or co-ordination, sometimes even without knowledge of one another. To form

them into universities, that is into bodies animated by a common life was necessary to bring them into mutual relationship. This organisation of scientific and medical studies in 1894 formed a link between the Faculties of Science and Medicine, and henceforth these two Faculties whilst each maintains its proper functions, are joined and co-ordinated in the pursuit of a common work. Similar connections have been established between the other Faculties. So a candidate for the *licence* in arts may choose a subject connected with his studies which he is taught in another Faculty. If he is reading philosophy, he may take anatomy, physiology, physics, chemistry, public law, or political economy; if he is studying history, he may take the history of law, constitutional law, Roman law, etc. In the same way for the degree of doctor in law, in political or economic science, a candidate may take for his optional subject one of the historic or economic courses taught in another Faculty.

So much for the internal organisation of the work. It is easy to see that it is characterised by two leading ideas—freedom and co-ordination.

The questions of administrative organisation brings me back to my starting point. This organisation, which has just resulted in the legal recognition of Universities, is by no means due to spontaneous generation, even if such a thing exists. It is rather the result of an organic epigenesis, the materials for which have been gradually formed and gradually co-ordinated with a view to a common end, in proportion as this end has appeared more and more distinct and as its realisation grew nearer. From the beginning it was proposed, as Jules Ferry said in 1883, "to form one day Universities uniting the most varied courses of study, that these may mutually aid one another, themselves governing in their own affairs, inspired by their duties and their importance, arousing ideas suitable to each part of France within the variation that the unity of the country includes, rivals of neighbouring universities, uniting in this rivalry both the interest in their own prosperity and the desire that great towns have to do better than others, and to win for themselves special claims to honour and to merit." Such Universities, which had been gradually shaping themselves, were already in existence at the moment the law intervened to assure them a definite civil status and suitable endowment.

The Universities that one wishes to see established must have full civil rights. But the material out of which they must be formed was there—viz., the Faculties. It was impossible to think of making a *tabula rasa* of the past and to build up an ideal plan. It was equally impossible to merge all the Faculties together and to withdraw from each its individuality. Universities then could only be unions of Faculties, of bodies composed of individuals, just as a living creature is made up of parts themselves living and each one performing its individual functions with a view to the common aim.

An administrative decree of July 25, 1885, gave back to the Faculties the civil rights that had become obsolete, and they were enabled to receive and hold property. From this starting point, another decree, dated on the same day, without giving them a regular income, made it

possible for them to receive, in the form of scholarship funds, money granted by departments, communes, or private individuals; and they were authorised to apply this in establishing additional professorships, maintaining libraries and laboratories, and founding scholarships. As it was foreseen that several Faculties in the same town would have a claim to the grants given, the same decree of July 25, 1885, established a general council of the Faculties to decide upon the division of the money. This was the beginning of what must form an indispensable part of future Universities.

This institution of the General Council, which was incidentally passed in a financial decree and for a limited financial purpose, was soon to develop and assume its true position among the united Faculties. The decree of December 28, 1885, both decided the composition of this Council and stated its powers. To the purely financial duty assigned at first, were now added other functions dealing with learning, schools, administration, and discipline. By this means, in view of further progress, and to put the plan to the test of experience, a possibility of common development was given to the Faculties of the same group.

So far no Act had been needed. Administrative action had sufficed, and it was deemed prudent at the start to keep within the limits allowed. But this was only a beginning. For further progress an Act was necessary. Further progress in this direction meant that the Faculties should obtain their own budget, and that the combined Faculties should become a corporate body with civil rights, and no longer a collection of individuals.

Article 51 of the Finance Act of July 7, 1889, gave the Faculties their own budgets, and decided that the credit opened at the Ministry of Public Instruction for the maintenance of these establishments should be paid to the budgets in the form of subsidies. These arrangements were executed by the decree of February 22nd, 1890, which settled the budget and the financial position of the Faculties.

In the same year the Government thought the time had arrived to inaugurate the Universities, and brought a Bill before the Senate for this purpose. According to the terms of this Bill, those groups of Faculties alone would become Universities which included Faculties of science, of arts, of law, and of medicine. There would have been seven—Paris, Bordeaux, Lille, Lyon, Montpellier, Nancy, and Toulouse. The Bill made no provision for those that had only three Faculties, or, like Besançon and Clermont, only two. There was no intention of suppressing them; but it is certain that the establishment of the great Universities, as they were called, would have weakened them. Very probably the privilege of conferring the degree of doctor would have been withdrawn; and so there would have been two grades of Faculties, some with mutilated functions, others with functions complete—the latter only would have become Universities.

This plan was in accordance with the ideas brought forward by the supporters of the University movement. At the end of the Empire, the Commission, presided over by Guizot, had pointed out that the principal reason of the inefficiency of the Faculties was to be found in the fact that



they were too numerous, too scattered, and that their resources were insufficient for division amongst themselves. By way of remedy it suggested that their energy should be concentrated at certain points, in number than before, and that a few scientific centres should be established and freely provided with everything that modern science requires. And from that time onward, on many occasions, Ministers of Public Instruction have re-affirmed this desire. But their action have not always corresponded to their words. From 1875 to 1883 instead of picking out those Faculties in which one could already foresee the Universities of the future, they urged all towns alike to incur expenses for the sake of their Faculties, whatever their importance for their future. And consequently towns of medium importance had to go to great expense in this direction. These facts were to produce an argument against the proposals. The Bill was brought before the Senate in the hope that that body would be less influenced by questions of local interest than the House of Deputies. It was of no avail. Localities that thought themselves injured by the Bill formed a coalition against it. The distrust of the professional schools, which feared competition of the Universities, and the dislike of certain Republicans who were convinced that the formation of Universities was a return to the old order of affairs and a denial of the Revolution, came to strengthen this coalition. The Bill came to nothing.

But the brilliant discussion to which it gave rise in 1892 at last brought out this one idea: that the Faculties must be brought closer together, and must form in each centre of learning a body animated by united aims. This view was at once utilised. Article 71 of the Financial Act of April 28th, 1893, formed the Faculties of each centre of learning into a corporate body, gave to each civil rights and a budget. Practically on that day the Universities were established.

When once this corporate body was formed by law, it was the duty of the head of the State, by virtue of his administrative power, to organise it. Two decrees were issued with this object on the 9th and 10th of April, 1893. The first, issued on the advice of the Higher Council of Public Instruction, modified, increased, and adapted to their new functions the powers of the General Council of the Faculties. The revision and enlargement of the arrangements of 1883 had become necessary, as henceforward the General Council would represent both the common interests of the united faculties and also the new personalities formed by their union.

What did the bodies so formed still lack, in order to be Universities so far as the French law could make them? Only three things, but three essentials. First of all, a name, their real name, the only possible name, the only name in use in all civilized countries; for the endless periphrasis under which the Act of 1893 had recognised them is no name at all: "The body formed by the union of several faculties of the State existing in the same academic area." In the second place, full power of discipline over their professors and students; for the administrative decrees had only been able to assign them that very small part of discipline which is not included in the existing law. From the point of view

of discipline, their professors came under other jurisdiction, and the students were only under their control with regard to particular faults and irregularities. Finally, an endowment, more generous, more reliable, more regular than that resulting from donations, legacies, and grants from the departments, communes, and individuals; a State endowment in proportion to the number of students.

The Act of July 10th, 1896, has completed the work that has been going on since 1885, by deciding in reference to these three points: (1) that the united faculties should take the name of Universities; (2) that questions affecting discipline and the settlement of disputes in connection with higher education should be transferred from the Academic Councils to the Councils of the Universities; (3) that from January 1st, 1898, the State should give up to the Universities the fees for enrolment and for the use of libraries, laboratories, and other facilities for practical work paid by the students of their faculties.

The prevailing influence of certain guiding principles is to be marked in this growth of the University system. The function of Universities is learning. From the lowest to the highest stage, learning, the spread and increase of learning, is the goal to which all organisation is to be directed. Now, scientific research is, in its very essence, free. Liberty alone can make it fruitful. Rules and methods are the only laws it recognises. And these rules can not be drawn up by a public authority. On the other hand, higher education in France, just as secondary and primary education, is a function, if not a monopoly, of the State. The professors are servants of the State. Consequently, they form a Civil service, differing, no doubt, from other civil services, in that they deal with questions of intellect and morals, but depending, like any other civil service, on the regulations issued by the public authority.

Consequently, the problem to be solved in the gradual formation of Universities has been to reconcile the freedom they require with their position of dependence. For that end, the Universities have been freed from all hindrance to the pursuit of learning. They are free to draw up their own programmes and to organise their own courses of study on condition that they make the necessary provision for qualifying for the degrees conferred by the State. In order to maintain and increase their activity as centres of learning, they have been granted the fullest civil rights with no restrictions beyond what the laws of the country and Ministerial responsibility impose. As the law has established them, the French Universities are not institutions of public utility, independent of the State and subsidised by the State. They are departments of the State, but with more freedom than before, leading their own life, and finding in the enjoyment of civil rights better means to carry out their scientific functions.

The plan proposed by the Act has been completed by the decrees of last July. I shall not state them here. Many of their provisions, relative to the civil life of the Universities, to the course of study of the students, and to their discipline, would have no interest for foreign readers. I will merely point out how far they assure to the Universities freedom in the pursuit of learning.



The first instruments of teaching are the professors of all grades. Within the limits of his position the professor controls his syllabus. No longer now does the central administration control, revise, alter, and decide upon the programmes for the Faculties each year. But a professor is not alone in his Faculty. The Faculties in a University are not isolated. "For the sake of the studies and in the interests of the students," as the phrase is in the decree of 1885, it is necessary that all courses of study should be co-ordinated first in the Faculty, and then in the various Faculties composing a University. The University Council alone has power to establish this co-ordination. It is this Council which has sovereign power "over the general organisation of the classes, lectures, and practical work suggested each year by the Faculties and schools of the University."

A single obligation is imposed. This organisation must include all that is necessary to obtain the degrees established by the State. "Presentation for degrees" is one of the functions for which the public authority has created the Faculties. This function still remains after the Faculties have become Universities. And so the law continues to insist upon the necessary provision for the discharge of this function. But the teaching of a University does not stop here, any more than a State degree is the limit of knowledge. The Universities will be able, in complete freedom, to make this further provision, out of their own resources, and helped by the State itself.

One of the reasons brought forward in favour of the creation of Universities was the fact that each day the connections between different sciences are becoming more numerous and more profound, and that new sciences hover doubtfully at their birth on the confines of the older sciences. Consequently, in order to follow the progress of science, it is necessary to establish within the organisation of higher education not only points of contact, but also anastomoses or openings through which ideas may be circulated and exchanged. It would be easy to give examples from mathematics and the physical sciences, from physics and chemistry, from chemistry and biology, from biology and the social sciences, from history and law, from all the positive sciences and philosophy. Yet, the Council of the University alone has power to establish these means of communication between the various Faculties. It has the supreme power over the organisation and regulation of the classes, lectures, and practical work common to the several Faculties. It is further in the interests of science that it has power to draw up regulations in reference to free classes. And, finally, it is in the same interests that it is allowed, with the approval of the Ministry, to institute "diplomas of an exclusively scientific character."

The question is not a new one. It was explicitly referred to in a statement presented to the Senate on July 22nd, 1890, in support of the first University Bill. "In France," it was stated, "the degrees given by the Faculties are State degrees. They confer not only a title, but a privilege. The graduate gains his degree in order to enjoy the rights and privileges which belong to it by law. Consequently, the examinations are the same in all Faculties." It is not denied that this implies for the



Universities some restriction in the liberty to teach. But would it be possible at the present moment, when our Universities have only just been established, to change from top to bottom our system of State degrees, which has taken so firm a hold upon the nation? It will be for the Universities themselves to lessen the evil of this necessary restriction by a well-thought-out scheme of co-ordination of their various parts. "With that object, all possible freedom is given to their Councils. They can establish certificates and diplomas, distinct from the State degrees. These would be without legal sanction, being only a proof of learning; but they would be evidence of knowledge gained in complete freedom of study, and they would become of increasing value in France, and especially abroad, as the University which granted them became more and more renowned for its learning."

Since that time efforts have been made to raise the standard of the degrees, and consequently to increase the liberty of the students. The old system has become more elastic; the programmes of study are not so rigid as before; the power of initiative on the part of the professors has a wider scope; the initiative of the students, formerly non-existent, has now become possible. Yet, the degrees are still degrees. They are definite guarantees of professional fitness, and as such cannot give full and complete liberty of study. The doctor, whose degree will give him the right to practice, must justify its possession by a certain standard of knowledge. Otherwise, there would be danger to the public. And, in fact, these degrees were established when there were many public dangers menacing French society, with the object of removing these dangers.

In other countries guarantees are equally demanded as a preliminary to the exercise of a profession in which knowledge is required. But the test is made, not by the Universities, but by the State Commissions, and the Universities devote themselves with complete freedom to the advancement of learning. It would have been impossible at this date to introduce and acclimatise such a system in France. The law would have been opposed to it, and a deep-rooted public opinion would have opposed any change of law. Consequently, as State degrees do not cover the whole field of knowledge, and as the work of the Universities must not be restrained within the limits of these degrees, the simplest and most efficacious plan seemed to be to authorise the Universities to grant, in addition to the State degrees, diplomas of learning, the conditions and contents of which should be decided by the Universities themselves. These are the terms in which Professor Lavissee, who is charged with the duty of drafting the Report of the Higher Council of Public Instruction, has summed up and justified this important innovation:—

"We neither can nor wish to break with the past. Students are prepared for the professions by our Faculties; and we grant degrees which give the right to exercise these professions. They are State degrees. The Faculties are responsible to the State and to the nation; so they must secure themselves by all possible guarantees; they must insist upon a previous course of study, attested by diplomas, and after that,

upon a complete course of study, and a graduated series of examinations. The system of State degrees cannot be modified.

"But are there any professors left whose whole energy is absorbed in the preparation for examinations? No. Are not law and medicine, mathematics, physics, natural science, philology, etc., studied for their own sake? Certainly they are. And, on the other hand, can one not imagine that there are students who wish to study one of these subjects without qualifying for a degree, and for whom it would be useless to insist upon either proofs of previous study or the full course that is imposed on candidates for a State degree?

"For instance, a student of history in the Faculty of Arts wishes to study Roman institutions; naturally, he thinks he needs help from the Faculty of Law; or, on the other hand, a law student, working at Roman law, would equally naturally have recourse to the Roman history lectures in the Faculty of Arts; or, a student of philosophy in the Faculty of Arts, who does not believe that philosophy can be divorced from science, will want to work at mathematics or physiology, according to his inclination. May he not go to the Faculty of Medicine, or to the Faculty of Science for the instruction he needs? And many other examples could be given. It will be objected that these young men are pursuing their favourite studies without wishing for a diploma. Undoubtedly. But, besides the fact that it is unsafe to predicate in young men an absolute indifference to honours and distinctions—an indifference which is not usual, even amongst men of ripe years—it must be allowed that the diploma would be a stimulus to their work. And, as this diploma could only be obtained as the result of a thesis or a monograph, the research work of our Universities would be increased, a matter of no small importance.

"Let us see what other possible candidates there would be for a diploma of learning. May it not happen in the chances of life that someone who has not passed through the usual routine of study should be capable of becoming a *savant* in physics, chemistry, natural history, geography, etc.? Should a young man whose circumstances have not permitted him to pass through a regular course of study be excluded for ever from our Universities? We may not give him a State degree. Why refuse him, if he deserves it, a diploma of learning? Have we the moral right to do so?

"And, besides, there are to be found everywhere in France men who are fond of intellectual work, who, for example, study the history of their profession, of their province or town, or the natural history of a district. There are engineers and officers of good education. These men have not taken the necessary degrees qualifying for the degree of Doctor. If any of them are found who would like to have some share in our University life, to work with us under our direction, it would be an advantage for them and for our Universities, which should lead men towards the intellectual life; and it would be an advantage for our country, to which much intelligence is lost for want of being sought out and directed.

"And for students from other countries this diploma will be found



useful. This is evident at the first glance, since these young men, with rare exceptions, have not passed through the same course of study as Frenchmen, and we obviously cannot insist upon the long residence which would be needful to enable them to reach step by step our degree of Doctor.

"To sum up, our State Universities, growing out of the Faculties, continue to prepare candidates for the Civil Service and the professions. They grant, as before, the State degrees, which open the door to the Civil Service and the professions. But, as a learned body, teaching the whole field of knowledge, which is included in no examination syllabus, they offer an initiation into the life of learning, without distinction of age or nationality, to all those who wish to learn for learning's sake. *Docet omnia*; and within this whole each one, professor or student, chooses his tiny part. Whoever is capable of critical research or of the discovery of truth should be able to become a student of the University and to share in the honours that the University grants.

"Without distinction of nationality, we say, and this brings us, in conclusion, to foreign students. It is not for them alone that we shall institute this new diploma; for ourselves first, but for them, too. We already have a large number of students from other countries. Now, it must be recognised that these students come from various countries. The new birth of our higher education, proved by the great activity of learning and research in France, has not escaped the notice of other countries. Several exhibitions of sympathy towards us have been made, of an interesting character, and redounding to our credit. Last year a proposal came from Scotland to form a Franco-Scottish Committee. The Scotch section of this committee paid us last summer a visit, which we are about to return; several of us start to-morrow for Edinburgh. A Franco-American Committee has been formed under similar conditions—the proposal coming from America. These two committees proposed to establish an intellectual and scientific connection between the Universities of Scotland and of France, and between the Universities of France and of the United States."

Such is in general outline the organisation of the French Universities. As I said at the beginning, it marks the end of one and the commencement of another stage. Up to this time, almost all power of initiative rested with the central authority. Henceforward, it is for the Universities to prove by their actions that they are capable of initiative. In a country with an excessive system of centralisation they may perhaps be the means of an intellectual and scientific decentralisation. If they should succeed in this it would, perhaps, be not the least part of their services.

(Translated by J. W. LONGSDON.)



## APPENDIX I.

DECREE OF JULY 21ST, 1897.

*Containing Regulations for University Councils.*

## CHAPTER I.

## ON THE CONSTITUTION OF THE COUNCILS.

Article 1.—The Council of each University includes :—

- i. The Rector of the Academy, President ;
- ii. The Deans of the Faculties and the Principal of the Higher School of Pharmacy.
- iii. Two Delegates from each Faculty or school, elected for three years by the Assembly of the Faculty or school from among the regular professors.
- iv. The Principal and one delegate, elected as above, from the "complete" school, or from the preparatory school of medicine and pharmacy of the Department in which the University is situated.

Article 2.—The election of delegates is by ballot and in accordance with the absolute majority of the votes given ; if the first two votings give no result, a relative majority is sufficient for the third.

If the votes are equal, the senior professor of the Faculty or school is elected.

Any dispute relative to the election must be brought before the Council, whose decision is final.

Article 3.—The Council is convened by the President.

The President is compelled to convene the Council on the written request of one-third of the members. The request must state the object of the meeting.

Article 4.—The Council elects each year a Vice-President from among its members.

It appoints a secretary.

It makes its own rules for the conduct of business.

Article 5.—Acting under the authority of the Minister of Public Instruction, the Rector examines questions which arise concerning the University, and sees that the decisions of the Council are carried out.

He represents the University in all its legal relations.

He has the right, in reference to the property of the University, to bring or defend any action at law, to act as arbitrator, and to prevent any prejudice to the property.

In case of absence he is represented by the Vice-President of the Council.

Article 6.—With the authority of the Rector, the Deans or Principals see that decisions of the Council are carried out in reference to the Faculties and University Schools.

## CHAPTER II.

### ON THE FUNCTIONS OF THE COUNCIL.

Article 7.—The Council decides :—

- i. The administration of the property of the University ;
- ii. The conduct of actions at law ;
- iii. The organisation of free lectures ;
- iv. The organisation and conduct of lectures, classes, and demonstrations common to several Faculties ;
- v. The general organisation of lectures, classes, and demonstrations proposed by the Faculties and schools of the University for each year's work.

The general scheme of the lectures, classes, and demonstrations is settled by the Council in July. It must include the instruction necessary for the degrees established by the State ;

- vi. The establishment of societies in the interests of students ;
- vii. The distribution among the students of the Faculties or University schools of the exemption of fees allowed by the law ;
- viii. The apportioning throughout the year of the holidays permitted by Article 43, section 2 of the administrative order of December 28, 1885.

Article 8.—The decisions of the Council taken on the preceding article are final if, within one month, they have not been annulled (as being beyond its power, or in contradiction to some regulation), by the Minister of Public Instruction, acting on the advice of the Permanent Section of the Higher Council of Public Instruction.

Article 9.—The Council resolves as to :—

- i. The acquisition, alienation and exchange of the property of the University ;
- ii. Leases of more than 18 years ;
- iii. Loans ;
- iv. Acceptance of donations and legacies ;
- v. Offers of grants ;
- vi. Courses of instruction to be paid for out of University funds ;
- vii. The institution and regulation of the degrees provided in Article 15 of the present Decree ;
- viii. The remission of fees payable to the University.

Article 10.—The resolutions of the Council in reference to the preceding article must be approved by the Minister before they are carried out.

Article 11.—The Council expresses its opinion as to :—

- i. The budgets and accounts of the University ;
- ii. The budgets and accounts of the Faculties ;
- iii. The creation, change or suppression of professorships paid out of State funds ;

iv. The regulations for the performance of work common to several Faculties ;

This common work comprises, besides the University library, work which shall have been decided to be common in each University, by the Minister on the advice of the Council ;

v. All questions submitted to it by the Minister, or the Rector.

Article 12.—Every member of the Council is permitted to bring forward resolutions relating to Higher Education.

These resolutions must be given to the President in writing. They are read to the Council and, at the following meeting, the Council decides whether they are to be considered.

Article 13.—Each University must grant for the University library a sum, at least equal to the fees paid for the use of the library.

Each University must also place at the disposal of each Faculty or School, for practical and laboratory work, a sum at least, equal to the fees paid by the students for such work.

This grant, together with any payment that shall be made by the State for the same object is to be applied to materials and apparatus for the laboratories and workshops.

Any balance remaining may be used : (1) in payments to the Curators, demonstrators and servants ; (2) in payment to the professors who, in addition to their statutory work, have supervised the workshops or laboratories.

These payments are fixed by the Rector at the suggestion of the Dean or Principal.

Article 14.—The Rector, acting on power delegated by the Minister of Public Instruction, appoints, on the proposal of the Council and on the advice of the Faculty or School concerned, to the offices of Superintendent of the classes, and Master of the courses, which are paid out of University funds.

Professors paid out of the same funds are appointed according to the forms provided by law.

Article 15.—Besides the degrees established by the State, the Universities may establish diplomas of learning.

These diplomas confer none of the rights and privileges attached to State degrees, and can in no case be declared equivalent to degrees.

The course of study and the examinations leading to these diplomas are decided by the Council of the University, and submitted to the permanent section of the Higher Council of Public Instruction.

The diplomas are given by the President of the Council, in the name of the University in a different shape to those given by the Government.

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### CHAPTER III.

#### ON THE PROCEDURE OF THE COUNCIL.

Article 16.—At its first meeting the University Council appoints by ballot a committee to deal with disputes and questions of discipline, during its tenure of office.



This committee includes at least, one member from each Faculty or School represented on the Council.

Article 17.—The initiative in matters of discipline rests with the Rector.

He may delegate a member of Council to draw up an indictment.

Article 18.—The Committee is directly instructed by the Rector as to the points on which the Council have to give a decision.

It takes all suitable means to get information, and draws up a report.

The parties must always be summoned by it and heard if they present themselves.

Article 19.—The summons to attend before the Council is sent by the Rector, by registered post, three days before the meeting of the Council.

The person concerned is informed of the day and hour fixed for hearing the case, and he is told that he has the right to defend himself, either by word of mouth, or by written memorandum, and that in certain cases provided by the law, he may be assisted by Counsel.

He is informed that the Committee's report together with the documents of the case will be at his disposal in the Secretary's office, a full day before the day fixed for the hearing of the case.

Article 20.—The following is the course of procedure :—

The Committee's report is read.

The parties are then brought in, if they are present, and their statements listened to.

If they are not present, and if they have sent written memoranda, these are read after the Committee's report.

When the parties have withdrawn, the President opens the discussion, and a decision by ballot is come to.

The Council has always power to request further information.

Article 21.—That the decision may be valid there must be one more than half the number of members present.

These decisions are voted by a simple majority of those present, except in those cases where the law demands a majority of two-thirds.

In case the votes are equal in a case of discipline, the opinion in favour of the accused prevails.

If the matter before the Council is contentious it is discussed at a further meeting, to which those members who may not have been present at the first meeting are summoned.

If the votes are again equal, the President has a casting vote.

Article 22.—The decision is notified by the Rector in a registered letter, sent within eight days to the house of the person concerned.

In the case of a student the decision is also notified to his parents or guardian.

Notice is given to the Minister.

Article 23.—In cases where an appeal to the Higher Council of Public Instruction is permitted, notice of this permission must be added to the notice of the decision, together with a notification of the time within which the appeal must be made.

Article 24.—The period of fifteen days during which the appeal can be made, dates from the day of the notification of the decision.

Article 25.—Judgment is suspended during the appeal, except in cases where the Council has ordered a provisional carrying-out of its decision.

Article 26.—Notices of appeal are received and entered at the office of the University Council. Formal acknowledgement is given, and the appeal is transmitted without delay to the Minister.

An appeal on the part of the Rector consists of a formal statement communicated to the parties concerned. A copy of this, together with the necessary documents is sent to the Minister.

Article 27.—In a case of dispute, or discipline affecting a school of Higher Education, situated within the area of University jurisdiction, without the seat of the University, the Principal of this school, and a professor elected according to Article 1 of this Decree are added to the Council.

## CHAPTER IV.

### VARIOUS REGULATIONS.

Article 28.—Each year the Council reports to the Minister on the present position of the University, and on the improvements that may be introduced.

Article 29.—Mayors of towns which allot grants to the University and to the Faculties, and under the same condition, presidents of the General Councils of Departments, presidents of Public Institutions, or of Institutions of Public Utility, and of Associations for the development of Universities, may attend the meeting of the Council for the consideration of the annual report, provided for in the preceding article.

In Paris, this right belongs to the Prefect of the Seine, and to one delegate of the Municipal Council.

By the decision of the Council, benefactors of the University can also be summoned.

## APPENDIX II.

[This appendix consists of statistical tables, showing the number of students—both Frenchmen and Foreigners—in the various Faculties of the fifteen Universities; and does not need to be translated. See pp. 597–602.]

### APPENDIX III.

The following letter, which appeared in the *Times*, may be conveniently reproduced here:—

#### THE UNIVERSITY OF PARIS.

TO THE EDITOR OF THE "TIMES."

Sir,—I beg to call your attention to the decision of the Council of the University of Paris, dated April 1, 1898, instituting the degree of "Doctor of the University of Paris" (not to be confused with the degrees of *Dr.-ès-Lettres*, *Dr.-ès-Sciences*, &c., which are granted by the State only).

For the sake of brevity, I only enclose that part of the regulations which deals with the Faculty of Arts, but it must be understood that the new degree (like the German *Ph.D.*) is of an eclectic, not of a special nature, and will be granted to students of science or of medicine on similar conditions (i.e., the composition of a thesis embodying original research).

The ordinary State degrees have always been, and still remain, practically beyond the reach of foreigners, the Government requiring all students without distinction to pass the various preliminary examinations, a process which involves a considerable loss of time. Such a restriction does not exist for the obtaining of the new degree, the regulations for which have been framed with due regard to the needs of foreign students. The "Doctorat" will, it is hoped, be of special value to teachers and students of modern languages and philology, and be sought by them as a fitting crown to their English University career. I shall be greatly obliged if you will kindly give to this communication all the publicity which lies in your power. Thanking you in anticipation, I beg to remain,

Yours faithfully,

H. E. BERTHON, *Taylorian Teacher of French*  
in the University of Oxford.

P.S.—I shall be glad to give additional information if necessary.

Oxford, April 25, 1898.

Le Conseil de l'Université de Paris, Vu l'article 15 du décret du 21 juillet, 1897, &c., Délibère:—

Art. 1<sup>er</sup>. Il est institué un doctorat de l'Université de Paris. . . . .

Art. 5. A la Faculté des lettres, les aspirants doivent, s'ils sont étrangers, présenter des attestations d'études de la valeur desquelles la Faculté est juge.

La durée de la scolarité est de quatre semestres au moins.

Elle peut être accomplie soit à la Faculté, soit dans un des grands établissements scientifiques de Paris.

La durée peut en être abrégée par décision de la Faculté.

Les épreuves comprennent:—1°. La soutenance d'une thèse, écrite en français ou en latin. 2°. Des interrogations sur des questions choisies par le candidat et agréées par la Faculté.



## The Position of Teachers in the State Secondary Schools for Boys in France.

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### I. CLASSIFICATION OF FRENCH SECONDARY SCHOOLS FOR BOYS.

II. QUALIFICATIONS OF TEACHERS IN THE SECONDARY STATE SCHOOLS. III. SALARIES AND RETIRING PENSIONS. IV. DUTIES AND HOURS OF WORK. V. PROSPECTS. VI. PROFESSIONAL STATUS. VII. CONCLUSION.

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I. Secondary schools in France are of two classes, *écoles publiques*, or State schools, and *écoles libres*, or private schools. We are here concerned only with the former. The position of teachers in the private schools, both ecclesiastical and lay, is very similar to that of the majority of teachers in English secondary schools. Little, therefore, is to be gained by making it the subject of a special inquiry.

The State schools for boys are either *lycées* or *collèges*. The former are maintained by the central Government, and are first-grade schools. The latter are maintained partly by the central and partly by the local Government, and are for the most part second-grade schools, from which a large number of pupils pass yearly into the *lycées*. There are 227 *collèges* with a total of 32,412 pupils, and 109 *lycées* with a total of 52,427 pupils. In the State schools instruction is therefore given to 84,839 boys out of an approximate total of 182,220 boys receiving education in secondary schools of all types.\*

II. The teachers in the secondary State schools are nominated either directly or indirectly by the Minister of Education, and they are paid by the State for their services. Before entering the profession they have to possess certain scholastic qualifications which are defined by statute. As the qualifications exacted vary according to the age of the pupils to be taught, a few words must be said of the arrangement of classes in a French State school. Of these there are four groups: (1) *Division Supérieure* in which are boys aged 14 and upwards. (2) *Division de Grammaire* for boys aged from about 14 to 11. These two divisions are common to the classical and the modern side. Beneath them come (3) the *Classes Élémentaires* for boys aged 9 to 10, and at the bottom are (4) the *Classes Primaires* for boys aged 6 to 8. These are taught by primary schoolmasters or mistresses, and do not therefore concern us here.

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\* Statistics: May 1897. The total given (182,220) includes the pupils (22,381) in the *petits séminaires*, which are concerned mainly with the education of future priests; also those in the private schools: *Établissements ecclésiastiques* (62,188) and *Établissements laïques* (12,812).

Higher scholastic qualifications are demanded from teachers in the *lycées* than from those in the *collèges*. In a *lycée* the professeurs of the *Classes Élémentaires* must possess the *certificat d'aptitude au professorat des classes élémentaires de l'enseignement secondaire* (Décret du 8 janvier 1881). This examination is competitive, and the candidates must be twenty years of age. The subjects in which they are examined are French, German, History, Geography, Mathematics, Science, and the Practice of Education. The value of the *certificat* may be judged from the severity of the competition :

		Candidates.	Successful.
1888	- - - -	160	17
1892	- - - -	150	23
1896	- - - -	201	17
1897	- - - -	136	10

The posts to which the *professeurs* with the above qualifications are entitled are in many cases occupied by *chargés de cours* with somewhat inferior qualifications. These latter are, however, diminishing in numbers, for posts vacated by them on retirement are given to *Professeurs* provided with the above-mentioned *certificat*, and often to men with still better qualifications, the *licenciés*.\*

The *professeurs* of the classes in the *Division de Grammaire* and the *Division Supérieure* in the *lycées* must be *agrégés* (Décrets des 10 avril 1852, 25 septem. 1872, 26 novembre 1875). There is nothing in England corresponding to the *agrégation*. It is a competitive examination for secondary teachers divided into the following schools: (1) Philosophy; (2) *Lettres* (French, Latin, and Greek), for form-masters of classes in the *Division Supérieure*; (3) History and Geography; (4) *Grammaire* (French, Latin, Greek), for form-masters in *Division de grammaire*; (5) Modern Languages; (6) Mathematics; (7) Physical Sciences; (8) Natural Sciences. It is difficult to estimate exactly the value of this degree, but a study of the *programme des conditions d'admission*, and the fact (1) that the candidates are the *élite* of the French University—*boursiers* (scholars) and students of the *École Normale Supérieure*†; (2) that the competition is very severe—(1887) entered 772, passed 108; (1897) entered 829, passed 80—(3) that the age of a

\* *Recueil de Lois et Réglements relatifs aux fonctionnaires des lycées et collèges* (p. 26), and *Tableau du personnel des lycées et collèges* (1896).

† The *école* is a college in which instruction, board, and lodging are given free to a limited number of scholars selected after competition from the best secondary school-boys. It prepares them to be teachers in the secondary schools or universities. No instruction in the theory and art of education is given. Many of the *Normaliens* subsequently become distinguished statesmen and writers. Among the number may be mentioned Taine, Jules Simon, Edmond About, Lavissee, Monod, de Coulanges, Gréard, Gaston Boissier, Richepin, and Pasteur.

candidate for admission is generally between 25 and 30 would make it at least evident that an *agrégé* has qualifications equal to and in many cases superior to those that competitors for an Oxford or Cambridge Fellowship are expected to possess. All the classes in the two *Divisions* are not yet taught by *Professeurs*; they are taught by well-qualified *chargés de cours* in possession of degrees or *certificats* defined by statute; but that these are not making way quickly enough for the *professeurs* is evident from the fact that temporary places have to be found for young *agrégés* in the *collèges*. In 1896 (*Tableau du personnel des lycées*) the proportion of *professeurs* to *chargés de cours* engaged in teaching the classes in the *Divisions* was as follows:

	Professeurs.	Chargés de Cours.
Lycées de Province . . . . .	1,248	946
Lycées du Département de la Seine (Paris, Vanves, Sceaux) and Lycée de Versailles . . . . .	465	11
	<u>1,713</u>	<u>957</u>

In the *collèges* the *professeurs des classes élémentaires* are expected to possess the *brevet supérieur de l'enseignement primaire* and the *certificat d'aptitude pédagogique* (Décret du 27 Juin 1892). To obtain the *brevet*, it is necessary to pass an examination in the subjects taught to elementary classes. The *certificat* is awarded to those who show a competent knowledge of the theory of education, and ability to teach and manage a class of boys.

The teachers of the *Divisions Supérieures et de Grammaire* must have the *licence ès lettres ou ès sciences*, or a certificate of equal value, or they must be *bacheliers*. It would be impossible to define exactly the distribution of the classes in the two *Divisions* among the *licenciés* and *bacheliers*, as it varies in each *collège*. The *licence ès lettres* is a University examination divided into "Schools." French, Latin, and Greek are compulsory subjects. The choice of the optional subject determines the candidate's selection of one or other of the "schools." An examination of the *programmes* and the age (20-25) of the candidates for the *licence* inclines us to regard it as equivalent in value to an Oxford Honour degree, but the difference in the nature of the two degrees makes it difficult to speak with any certainty. It would be equally difficult to estimate the exact value of the *licence ès sciences*. For the *licence avec mention langues vivantes* may be substituted the *certificat d'aptitude à l'enseignement des langues vivantes*, to obtain which a competitive examination in Modern Languages has to be passed. By competing for the *certificat*, candidates are freed from the necessity of studying the classical subjects set for the *licence*. The holder of the *certificat* stands on an equal footing with the *licencié*; he will be a *professeur* in a *collège* and a *chargé de cours* in a *lycée*. That he is well



qualified to teach modern languages may be assumed from the severity of the competition. In 1897 out of 431 candidates only 36 were successful. Little need be said of the *bacheliers*. The examination they have to undergo is divided into two parts, *classique* and *moderne*, and it is the leaving examination for boys quitting the classical and modern sides in the secondary schools.

At present the value of a preparatory course of training in the art of education has been recognised only by few, and no serious efforts have been made to impose it upon intending secondary teachers. But in respect to their knowledge of the subjects they teach, the qualifications of the teachers in the State schools do not leave much to be desired; and, if the term "secondary" is applied only to the education given to the boys in the classes of the *Division Supérieure* (ages 14 and upwards), the scholarship of the staff is beyond criticism. Thus limited, secondary instruction in the *lycées* is given by *agrégés*, and in the *collèges* by *licenciés*, or by teachers with equally good qualifications.

III.—The best qualified and most experienced teachers are to be found in the 13 great *lycées* in or near Paris. They are entitled to higher salaries than the teachers in the provincial *lycées*, and these, again, are better paid than those in the *collèges*. The scale of remuneration is as follows\* :—

*Lycées (Seine et Versailles).*

Professeurs des Classes		
Elémentaires - - -	Initial 3,000 <i>f.</i> (120 <i>l.</i> ),	rising to 4,800 <i>f.</i> (192 <i>l.</i> )
Professeurs (Div. Supérieure		
et de Grammaire) - - -	„ 5,000 <i>f.</i> (200 <i>l.</i> ),	„ 7,500 <i>f.</i> (300 <i>l.</i> )

*Lycées de Province.*

Professeurs (Elémentaires) -	Initial 2,500 <i>f.</i> (100 <i>l.</i> ),	rising to 3,900 <i>f.</i> (156 <i>l.</i> )
Professeurs (Divisions) - - -	„ 3,200 <i>f.</i> (128 <i>l.</i> )	„ 5,200 <i>f.</i> (208 <i>l.</i> )
Chargés de Cour (all classes) -	„ 2,100 <i>f.</i> (84 <i>l.</i> )	„ 4,800 <i>f.</i> (192 <i>l.</i> )

The teachers in the *collèges* are divided according to their qualifications into three classes :

Class I. (licence, certificat)-	Initial 2,500 <i>f.</i> (100 <i>l.</i> ),	rising to 3,400 <i>f.</i> (136 <i>l.</i> )
Class II. (Bachelier) - - -	„ 1,900 <i>f.</i> (76 <i>l.</i> )	„ 2,700 <i>f.</i> (108 <i>l.</i> )
Class III. (Brevet) - - -	„ 1,600 <i>f.</i> (64 <i>l.</i> )	„ 2,400 <i>f.</i> (88 <i>l.</i> )

All the above salaries are non-resident. The *agrégés* for whom places have, at the start, to be found in the *collèges*, are paid the initial salary given to a *professeur de lycée*. Further, all the *agrégés* are entitled to an annual sum of 20*l.*, the *traitement d'agrégation* and a few senior *agrégés* receive *un complément de traitement*, amounting to 40*l.* in the *lycées* of the Seine and of Versailles, and to 20*l.* in the provincial *lycées* (Décret du 16 juillet, 1887, Art. 3). Augmentation of salary does not follow promotion from the mastership of a lower to a higher form, or promotion from one school to another, except it be from a *lycée de province* to the *lycées* of Paris and Versailles. The rate of increase is determined largely by the number of vacancies caused by retirement or death. In

\* Décret du 16 juillet, 1887. For detailed table of salaries see *Recueil de Lois et Réglemens*, pp. 24-31 and 41-43.

apportioning the sum to be disposed of, attention is paid both to the claims of merit and of seniority—more to the former in the case of teachers of the higher forms. Questions relative to promotion and augmentation of salary are decided by a *comité consultatif*. As most of the members of this committee are secondary-school inspectors, and as they have before them the written opinions of the various persons outside the committee who have at any time inspected the work of a teacher, conspicuous merit is not in danger of being overlooked.

The teachers in the State schools have a right to a retiring pension at sixty years of age, after thirty years of service. This pension amounts to two-thirds of the average salary received by the teacher during the last six years of service, and must not exceed 6,000 francs (240*l.*). Towards this pension he pays five per cent. of his annual salary, a twelfth of his first year's salary, and the same amount each time his salary is augmented (Loi du 9 juin 1853). In certain cases a teachers who has been incapacitated by accidental causes, can obtain his pension whatever his age (*même loi* Art. 11). Those incapacitated by infirmities resulting from the exercise of their duties can secure the pension at 50 years of age, after 20 years of service (Art. 11). Provision is also made for the widows and orphans of secondary schoolmasters (Arts. 13. 14. 16).

The figures above stated represent actually more than the corresponding equivalents in pounds sterling, for the standard of comfort in France is undoubtedly lower than it is in England. Yet it would be rash to suppose that the immediate prospect of about 200*l.* a year, rising by slow stages to about 300*l.*, and the ultimate prospect of a small pension, are sufficient to induce so many brilliant university graduates (about 800 each year) to undergo, in spite of severe and increasing competition, the long and laborious preparation for the *agrégation*. The causes of the popularity of the scholastic profession in France must be looked for in the compensatory circumstances of the teacher's position.

IV.—The *personnel* of a French State school is divided into three groups: (1) The principal (*Proviseur de lycée, Principal de collège*) and his subordinates, who are responsible for the administration of the school; (2) *maîtres répétiteurs*, under the control of the *censeur* and *surveillants généraux*, who undertake the supervision of the pupils outside the class-room, and (3) the teachers, whose business it is to teach. *Firstly*, therefore, outside his class-room the teacher is free. *Secondly*, the number of hours' class-work that he is required to do each week is small compared to the number required from an English assistant-master. The *heures de service* are fixed by statute (arrêté du 25 août 1892) In the *lycée de Versailles* and the *lycées* of the Department of the Seine, the maximum number of hours class-work per week required of *professeurs* of classes in the *Division supérieure* is from 12 (highest class) to 15. The maximum number is not always exacted. There are cases in which the teacher has only seven hours a week class-work. For the *professeurs* of classes in the *Division de Grammaire* 15 is the maximum

and 19 for those in charge of the *classes élémentaires*. One or two more hours are required of the *professeurs* in the provincial *lycées*, and generally from about 16 to 20 of those in the *collèges*. For *chargés de cours*, the maximum is raised by one hour throughout. Every teacher is obliged, unless he is able to excuse himself on the plea of ill-health, to add to the maximum another two hours, if called upon to do so, in which case he receives an extra fee. A like fee is paid for any additional class-work that offers itself. A young *professeur agrégé*, known to the writer, receives for six hours per week extra class-work in a provincial *lycée*, fees amounting to 900f. (36l.), in addition to his salary of 3,700f. (148l.), for the regulation 16 hours.

In connection with the subject of *heures de service*, the opinion of an eminent educational authority, the late Professor Marion, is well worth recording: "*Si l'on veut que l'enseignement soit rif, les méthodes éducatives, l'action morale pénétrante, ce serait assez pour tous de quinze heures par semaine au maximum. Et moins encore servirait mieux. Les élèves s'en trouveraient aussi bien que les maîtres* (L'Education dans l'Université 221-2). In other words, the value of the work done in the class-room depends not upon the number of hours devoted to it, but upon the freshness and keenness of both masters and pupils. In France this truth has not yet been fully recognised. The masters have a reasonable number of *heures de service*, but the pupils (Division Sup. and de Grammaire) are required to do from 10 to 11 hours of work a day. Further, the reduction of the *heures de service* has been, to some extent, effected at the expense of the pupils. Classes of 30 boys are common, and many are to be found numbering from 40 to 50. To teach classes of this size effectively is next to impossible.

The difficulties in the way of bringing about a reduction of the work-hours both of masters and pupils are numerous. One means of surmounting them, in favour of which much is to be said, would be found in a judicious re-arrangement and pruning of the secondary school curriculum. If the aim of instruction is, as has often been stated, to give the pupil power to think for himself and to create in him a love of knowledge, the quantity of matter taught is of far less importance than the method by which it is taught. It is not necessary for the boy to quit school with a load of book-learning, for the most part ill-digested and soon forgotten, but it is necessary for him to enter life with a well-ordered and well-trained mind, ready to assimilate fresh knowledge and capable of putting it to use. There is good reason for supposing that this aim would more easily be achieved if the school-boy were taught fewer subjects and those thoroughly, and if teachers were able to devote more time to preparing and thinking over their daily work.

Another way that suggests itself of accomplishing the reduction so as to avoid the expense of increasing the staff and the error of enlarging the classes, would be to lengthen the school-term and limit the holidays—at present of eleven weeks duration in France and of about fourteen in England—to eight or ten weeks which under the changed conditions of service would be ample. Such a course would



not perhaps find favour with the parents of boys in boarding-schools, but it would be quite practicable in the case of day-schools.

V.—*Thirdly*, secondary teachers in France, if disposed to devote their spare time to private study and research, receive every encouragement from the University, which aids them in the choice of a subject and holds out to them the prospect of gaining the coveted distinction of *docteur*. This degree is the highest it confers, and it is the requisite qualification for a University professorship. It is open to all who are *licenciés*, and is obtained by writing a thesis. The post-graduate preparation for the *doctorat* is not fettered by restrictions of time and place; the thesis is prepared at leisure, and is the result of many years' careful study and research. Those who obtain the distinction have generally passed their 30th and sometimes their 40th year. The thesis is, in fact, often a standard work. Among others are the *Averroès*, of Renan; Claude Bernard, *le Suc gastrique et son rôle dans la nutrition*; Ribot, *L'Hérédité Psychologique*; Lachelier, *L'Induction*; Boutroux, *La contingence des lois de la nature*; Taine, *La Fontaine*; Larroumet, *Marivaux*; Rebelliau, *Bossuet*; and more recently Izoulet, *La Cité moderne*. The *docteurs* are for the most part either teachers in the secondary schools or ex-secondary teachers occupying a chair in one of the French universities. Both as a stimulus to the post-graduate study of education and of other subjects, and as a means of increasing the efficiency of the scholastic profession, the *doctorat* is an institution of the highest value.\*

Other posts besides university professorships are open to the *élite* of French secondary teachers. Such are the inspectorships and the posts of *Recteur d'Académie*. The latter are the heads of the 16 (including the Académie d'Algers, 17) districts into which France is divided for educational purposes. The posts of *proviseur de lycée* are also given to teachers, but they are far from being as lucrative as the headmasterships of English public schools. The salary of the *proviseur* of a *lycée de Paris* does not exceed 360*l.* per annum. The prospects of the brilliant *docteurs* and *professeurs agrégés* are naturally not confined within the limits of the scholastic profession. Many quit the class-room to become statesmen, diplomatists, and writers. M. Burdeau, late President or Speaker of the Chamber of Deputies; M. Dupuy, ex-Prime Minister; Challemeil-Lacour, late President of the Senate; Jules Simon, Cardinal Perraud, MM. Patenôtre, Jaurès, Jules Lemaitre, and Francisque Sarcey are examples.

VI.—*Fourthly*, the status of the scholastic profession is much higher in France than in England. This is due to the fact that it is a closed profession, and that each year the *élite* of the university students pass in to it from the *École Normale Supérieure* and the *Sorbonne*. Moreover, the French schoolmaster belongs to a distinguished and united body, the *Université*. A *professeur* in a *lycée* or *collège* is as much a *professeur de l'université* as a professor at the *Sorbonne*. Many secondary teachers—30 at least in the 12 *lycées* of the Department of the Seine are *officiers* or *chevaliers de la Légion d'Honneur*. *Lastly*, the teacher has a voice in

\* For further particulars relating to the *doctorat*, see Journal of Education, March, 1895 (p. 159).

the direction of educational affairs, for his representatives sit in the central council, the *Conseil Supérieur de l'Instruction Publique* (Loi du 27 février 1880). Of its 58 members, eight are *professeurs agrégés* elected by the *agrégés* in active service, and two are *licenciés* representing the *licenciés* in active service in the *collèges*.

VII. - The French master receives, it is true, but modest remuneration for his services. On the other hand the prospect of a safe income and a retiring pension makes it easy for him to throw his whole heart into his work, for it suffices to free him from the sense of insecurity which harasses the minds of most teachers on this side of the Channel. Furthermore he enjoys, as the foregoing summary testifies, many advantages that compensate largely for his comparative poverty. The result is that the State experience no difficulty in securing the services of the best of its University graduates, and is in a position to insist upon their qualifying themselves in a very thorough manner for their work.

F. B. KIRKMAN.

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Works consulted—(1) "Recueil des Lois et Règlements relatifs aux fonctionnaires des lycées et collèges," in which will be found the *décrets* mentioned in this inquiry. (2) Statistique de l'Enseignement Secondaire en 1887—1<sup>re</sup> Partie; (3) Tableau du personnel des lycées et collèges 1896. (4) Plans d'études de l'enseignement Secondaire (Delalain). (5) Programmes des examens (Delalain). (6) Annuaire de l'Instruction Publique 1897 (Delalain). (7) Marion: Education dans l'Université. Much valuable information has been kindly supplied by the *Ministère de l'Instruction Publique* and by Educational Authorities in France.

## The French Leaving Certificate.

*Certificat d'Études Primaires.*

law  
authorizing  
award of  
certificates.

By the Law of March 28, 1882, the Minister of Public Instruction in France was empowered and directed to provide, both in the capital and in the provinces, for the award of certificates to scholars at the end of the primary school course. The purpose of this measure was partly to attest that the holder had received a fair elementary education, and partly to facilitate his entrance into the ranks of labour.

This law has now been in operation for sixteen years, and has proved to be highly successful. Its influence on the social and industrial condition of the people, on the schools, the teachers and the parents, has been so marked that it well deserves the serious attention of English teachers and public authorities, and of all others interested in the expansion and improvement of our own school system.

mer  
part on  
subject.

In a Parliamentary paper which I was instructed to prepare in 1891, I gave the following account of the working of the plan up to that date:—

“The most potent instrument in maintaining a high standard of school attendance in France is probably the *certificat d'études* or leaving certificate, for it applies not merely to the picked scholars who prolong their education in the higher grade schools but to the rank and file of French children. Any boy or girl, however or wherever educated, can, after the age of eleven, be presented to the local authority, and can claim, after passing a successful examination in elementary subjects, a certificate which will exempt him from the legal obligation to attend school and qualify him to obtain employment. The plan came into use as early as 1836, but was not legalised until the statute of 1882, which provided in every part of France for the establishment of a local tribunal or ‘jury’ empowered to examine candidates and to grant certificates. In that year the number of boys presented was 80,301, of whom 53,156 passed, the number of girls being 54,138, of whom 47,077 passed. During the last decade the numbers have steadily increased, and in 1889 123,598 boys and 97,012 girls were examined, of whom 90,663 boys and 74,458 girls passed, making a total of 165,211 children between the ages of 11 and 16, who in a single year satisfied the requirements of the examiners and received certificates. A similar leaving examination has been devised for the end of the course in the higher grade schools, and in 1889 there were 2,550 candidates (1,652 boys and 898 girls) presented at these examinations, of whom 1,491 (960 boys and 531 girls) were successful. In Paris alone in 1888 the total number of candidates for leaving certificates was 5,873 boys and 4,427 girls, 81 per cent. of the former and 78·3 of the latter having succeeded in the examination. It is to be observed that the proportion of successful scholars from the private or unaided schools is not less favourable than that of pupils from the public schools.



"The local jury or board empowered by law to issue these leaving certificates is variously composed of official and representative personages; but in every case much of the practical business of examination is done by the Government inspector, aided by the head teachers of the district, provision being made in every case that no teacher shall examine his own pupils. The law does not permit any child under 15 to work in a factory or workshop more than six hours a day, unless he or she has obtained the certificate. In Paris the examination extends to reading, writing, and arithmetic, the elements of geography, history, and natural science, and a composition on some familiar subject, especially the rights and duties of citizens—a branch of instruction much insisted on in French schools. A scholar of 13 or 14 unprovided with his *certificat d'études* has no chance of admission to a higher grade or technical school, and year by year such a scholar finds himself at a greater disadvantage when he presents himself in the industrial market. Employers everywhere seem to value the certificate, and the number of such employers who regard its possession as a condition to be fulfilled by applicants increases every year. It is hardly necessary to say that in public companies, in most large business establishments, and in all branches of the public service, the certificate is indispensable. M. Gréard speaks strongly of its moral effect: 'C'est le bénéfice des examens du certificat d'études qui tiennent les esprits en haleine et concourent ainsi à développer les habitudes de persévérance et de ponctualité dans le travail.'

"There can be little doubt that the leaving certificate system and the state of public opinion which sustains it, combine to exercise a strong influence on the regular attendance of the children. A scholar who is irregular has little chance of succeeding at the examination at all, and has certainly no chance of obtaining it so early as 11 or 12, and so of acquiring the right to go to work before he is 13. And since the scholars of the private and confessional schools are all alike eligible for the examination and have the same motives for attending it, the indirect effect of the law of 1882 is to improve the character of the instruction in those schools, and to secure a high average of 'frequentation' in them, although they are not directly subject to any State control. The one criticism which I have heard most frequently in France on the working of the system is that the local authorities often grant the certificate on rather too easy terms, especially where the demand for juvenile labour on farms is active. But the standard of proficiency is said to be improving."\*

Further inquiries and experience have since confirmed the hopeful forecast which was thus expressed, and justify a fuller explanation of some administrative and other details.

The law prescribes that in every canton there shall be an Examining Commission composed of: (1) The Inspector of Primary Schools for the district, who acts as president, (2) Constitution of the local commission. *d'examen.*

\* Memorandum on the working of the Free School System in America, France and Belgium, 1891.

several head teachers of Primary Schools, (3) two or more persons, *e.g.*, lawyers, doctors, professors or other local residents, specially nominated by the Rector of the Provincial Academy and known to be interested in the schools. These Cantonal Commissioners form a Board, which meets regularly at the end of each scholastic year.

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It is expressly enjoined that the level of the educational requirements shall not rise above the *cours moyen* of a good primary school. The examination is partly oral and partly written. It includes:—

- (a) A dictation exercise of about fifteen lines of print, which serves also as a test of handwriting.
- (b) Questions on arithmetic, the metric system and its simple applications, *avec solution raisonnée*.
- (c) A composition exercise on one of these subjects (i.) Moral and Civic Duty; (ii.) History and Geography; (iii.) Elementary notions of Science and its applications.
- (d) For girls an exercise in needlework, and for boys in rural schools an examination in agriculture, and in urban schools, one in drawing and design.

The oral part of the examination includes reading aloud, recitation of some choice literary extract, either in prose or verse, with questions on its meaning, besides general questions in history and geography.

A scale of marks is officially prescribed, and no candidate receives his certificate unless he scores at least half the marks attainable under each of the heads of the examination.

Besides these obligatory subjects, the candidate may present himself or herself for an additional examination in one or two optional (*facultative*) subjects, *e.g.*, drawing and design. Special mention is made on the certificate of any success thus attained.

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In addition to the ordinary certificate, another of a like kind has been provided for scholars of the higher primary school. No candidate is admissible to this examination who has not previously obtained the elementary certificate; and therefore no minimum age has been fixed for admission. The Commissioners to whom the higher duty of awarding this certificate has been entrusted are named in each Department by the Rector of the Provincial Academy. They include inspectors, professors in colleges or secondary schools, and lecturers in training colleges. Two ladies at least are nominated as members of each Commission, and are specially charged with the direction and supervision of the examinations for girls.

The examination for these higher certificates is attended for the most part by scholars at the end of the fifteenth or sixteenth year, who have pursued their studies in some higher grade school. It is open, however, to other candidates who fulfil the necessary conditions as to age and previous certification. These higher primary schools are, as has been fully and very clearly shown by Mr. Morant,\* not secondary schools, but primary schools with

\* The French System of Higher Primary Schools, p. 287 in Special Reports on Educational Subjects, 1897.

a developed programme, intended to carry forward the elementary school work on the same lines up to the age of 16. As I have explained in the memorandum already quoted,—“They are officially described as designed for those scholars for whom elementary education properly so called is not sufficient and for whose needs secondary education would be inappropriate.” They are not, in fact, secondary schools, the instruction in them is perfectly gratuitous, and they form an integral part of organised primary instruction. No Latin or Greek is taught in them; they stand in no relation to the *lycées* or the colleges, and they form no part of a scheme providing a “ladder” from the *Kindergarten* to the University. Their aim is not to lift the pupil out of the ranks of the industrial class, but to enable him to occupy a higher and more honourable place within that class. They seek to provide education specially fitted for the skilled artisan or merchant’s clerk, and their chief attention is given to drawing, to *comptabilité*, to science, especially to physics, chemistry and mathematics; and to the acquisition of one modern language. In several of these schools special attention is given to manual training, to the use of tools and instruments, and to the learning of trades.

This being the general aim of the higher primary school, the *Certificat d’Etudes primaires supérieures* corresponds in the main to the curriculum of those schools. The examination, which is partly oral and partly by written papers, extends to five subjects:—

The subject and standard of examination.

- (a.) A composition in French, consisting of a letter, a narrative—(*récit, compte rendu ou rapport, développement d’une maxime, etc.*)
- (b.) A paper on history and geography.
- (c.) An exercise in mathematics and in the elements of physical and natural science.
- (d.) Design and geometrical drawing.
- (e.) An exercise in one modern language at the choice of the candidate, German, English, Italian, Spanish or Arabic. An easy piece of translation is given of some passage not prescribed beforehand, but the candidate is permitted to use a lexicon.

Under each of these five heads, there are three distinct forms of examination corresponding to three several programmes adopted in the schools, viz.:—(1) The section for general instruction, (2) the industrial section, and (3) the commercial section. Candidates in inserting their names at the outset are required to specify the section in which they severally desire to be included. The fifth (e) of the departments of the examination (modern languages) may be dispensed with in the case of those who select the industrial or agricultural section, but is obligatory on all who present themselves in section (1) or (3). There are further special practical tests of proficiency in music, manual work, or gymnastics; and success attained in one of them is recorded to the credit of the student. The certificates thus



awarded are delivered to the candidates in a public ceremony by the Rector of the Provincial Academy, and in the presence of the municipal authorities and the parents.

the leaving  
examination  
is com-  
petitive.

It is an important feature of the whole scheme that the examinations are not competitive, and are not designed to single out scholars for special distinction. That purpose—a very legitimate one—is to be fulfilled, if at all, by other agencies. On this point M. Gréard says :—" Que certaines récompenses soient mises au concours, cela est désirable et n'a rien de dangereux. Mais, trop souvent renouvelé et appliqué au résultat proprement dit des études, le concours a pour effet d'incliner les maîtres et les élèves à la recherche des succès d'éclat, et rien ne serait plus préjudiciable au développement sagement entendu de l'instruction primaire. Les élites arriveront toujours à sortir du rang. C'est sur la masse des enfants que l'intérêt social commande d'exercer une action efficace. Qu'ils sachent que c'est par le travail de tous les jours, par la bonne conduite de tous les jours, sous les yeux de leurs camarades ordinaires et de leurs maîtres habituels, leurs juges à l'examen, qu'ils obtiendront l'avancement de classe proposé à leur application ou le certificat qui en constate le profit suprême : c'est là seulement que peuvent être la force et la moralité des études primaires."\*

statistics.

The extent to which this system prevails in France may be estimated from the fact that during the sixteen years in which it has been in existence the number of candidates and the proportion of successes have steadily increased. In 1897 the total number of scholars presented for examination was 236,859, of whom 129,460 were boys and 107,355 were girls. The number of certificates awarded was 101,309 to boys and 84,726 to girls, making a total of 186,035, and showing an average of 78·5 per cent. of successful candidates. Besides these, the number of scholars presenting themselves for the higher examination was 2,064, of whom 1,224 passed and obtained the diploma.

the practical  
effect of the  
system.

In practice, the system is found to fulfil several important purposes. It gives to teachers a clearly defined standard of the proper work of an elementary school, and indicates the goal which ought to be reached in the twelfth or thirteenth year by every fairly instructed child in such a school. It strengthens the hands of the teacher by supplying his scholars with an additional motive for diligence, and with a new interest in their own improvement. It is specially valued by parents, as an attestation of the progress of their children, and as a passport to honourable employment. It serves as an entrance examination for admission to higher and technical schools, and prevents those schools from being encumbered by the presence of pupils who are deficient in the rudiments of learning. It is year by year more highly appreciated by the heads of firms and other employers of labour, who are accustomed to ask for it before admitting young people into their service. Moreover it furnishes

\* *Éducation et instruction* par Oct. Gréard Vice-Recteur de l'Académie de Paris : Membre de l'Académie Française. p. 85.

a measure of the efficiency of the primary schools, and a means of estimating the comparative success and ability of the teachers.

A very effective illustration of the actual working of the system, and of its influence on the home life of the industrial population, is furnished to me in a letter just received from a friend who has been travelling some time in rural France. He says:—

“While in France, I came across in a little village home, an interesting proof of the value set by parents and children on the primary certificates; and a young girl gave me a graphic account of the incidents of, and questions set in the examinations which she and her sister had in different years succeeded in passing. She was now about seventeen, but the examination five years before, had evidently been one of the most important events of her life. I was much struck by the effect which this all-round test had evidently had on the course of her education. So far as her training went, she was an educated girl, her school studies had not been patchy or disconnected, but formed a well balanced whole.

“I shall never forget the delightfully refined peasant mother, the beautifully clean living-room of the cottage, the neatly framed certificates on the wall, or the radiant pride with which she spoke when I noticed them: and then our talk with the young girl herself, one of the daughters who had won the certificates,—her self-possession, her modest pleasure in recalling all the circumstances of that memorable examination, and the cultivated balance of mind and bearing which showed itself in all her conversation.”

This French experience is not without a special significance for ourselves at the present stage of our educational history. We have arrived by a series of tentative efforts at a point at which it is desirable to review the work of our elementary school system; to ask whether it has accomplished all that it was hoped to achieve or is capable of achieving; and to set before ourselves a more clearly defined ideal of the purposes which a good primary school ought to fulfil.

The bearing of this experience on the problem that has to be solved in England

Hitherto the Education Department has sought to attain its end by laying down with great precision the steps by which the elementary course should be graduated and by defining the subjects and the degrees of attainment which are appropriate respectively to the years of study from the seventh year to the age of fourteen. For a time, these regulations were practically enforced through the plan of assessing the amount of public grant payable to each school by counting the number of passes after individual examination. Although this plan has been abandoned, the amount claimable by the several bodies of local managers, as their share of the Parliamentary grant is still to some extent determined by the number of subjects taken up in a school, and by the results of individual examination, as recorded in the Inspector's report. Experience has shown that these

Our standards

regulations have had some effects, both favourable and unfavourable, on the general progress of education.

On the one hand, it has been found that prescribed standards of examination and attainment for each year, even with the large range of options permitted by the Code, often interfered injuriously with the liberty of classification, and with the teacher's power to adapt his methods to the varied requirements of his scholars. The connexion of the results of each examination with the award of a money payment, and often with the amount of a teacher's salary, introduced a disturbing mercenary element into his calculations, and sometimes tempted him to adopt measures designed too consciously rather with a view to obtain the maximum grant than to subserve the best interests of the scholars.

On the other hand, schedules of graduated instruction such as appear in the appendices to the English Code have their value, as showing what is the amount of acquirement which can reasonably be expected of children at the successive stages of their school career. They serve as a guide both to teachers and inspectors; they give definiteness to the plans of all the members of a school staff; and they could not be dispensed with except at the risk of much looseness and incoherence, both in the aims and in the practice of primary instruction.

Moreover, individual examination, though an unsatisfactory method of computing a money grant, unquestionably acts as a safeguard for thoroughness and exactness, and as the best measure of a scholar's progress. It is held to be indispensable in all higher schools and universities, that such examination should be conducted, in part at least, by external authority and not wholly by the teachers themselves. Nobody proposes to substitute a mere general inspection of methods and organization for actual individual examination in our secondary and public schools. No parent in such a school would be satisfied to learn that his son belonged to a class which was certified by an inspector to be well ordered and taught. He would desire to know in fuller detail the *status* and progress of the particular pupil in whom he was most interested. It is to be feared that the association in the minds of English elementary teachers between individual examination and a wrong and discredited mode of distributing public money, has led to a belief that the examination of the actual attainments of individual scholars is in itself an error in our educational policy and even a grievance to teachers. Yet it is one of the truest tests of the efficiency of an educational system. The inductive method of investigation and verification, which is now employed in all departments of science, which judges the worth of theories and methods, by asking what is their practical out-come and result, and which refuses to assume that any one method is necessarily the best until it is subjected to the test of experiment, must ever find its due place in any system of organised public instruction. Provided that we secure in the first place a right conception of the results which ought to be attained, and in the second a skilful and impartial method of



appraising those results, schools and educational processes must always to some extent be estimated by the results which they can produce. Careful individual examination is needed for the due satisfaction of parents and of school managers, for the proper award of any prize or distinction which the school may provide, and for the protection of the interests of the less forward scholars who are not likely to win any distinction. And it is difficult to see how responsible public authorities can dispense with it, if they would maintain a high standard of excellence in either the work or the methods of our schools.

But it is desirable that we should recognise fairly the necessary limits to any system of individual examination. All good teachers know that the best part of their work cannot be measured by any examiners, however skilful and sympathetic. The kindling of interest, the formation of taste and character, the habits of observation and of application, the love of reading, and the aspiration after further knowledge and self-improvement are among the best and highest results of school training. But although these are of supreme importance, they are precisely the results which cannot be adequately tested by examination. At the same time the history of the past shows that these results are generally secured incidentally and most effectively in those schools in which the intellectual level is highest, and in which work of the ordinary educational type is most honestly and systematically done. We have to admit, once for all, that there is an inevitable and very serious drawback to the usefulness of examinations. We can only measure what is measurable. Yet while some of the more precious and less palpable results of instruction may escape observation and defy the analysis of examiners, that part of education which takes the form of direct instruction and is capable of being tested by individual examination, is, though not the highest part, yet a very substantial factor in the education of the child. We have learned by experience that it is a mistake to make a *fetish* of the examination system, or to regard it as a satisfactory or final solution for all our educational problems. But we may yet have to learn that it would be an equally grave mistake to discard it altogether, or to lose sight of its legitimate uses. The opposite of wrong is not necessarily right, and it must be manifest to all who are intimately acquainted with the subject that in our present stage of educational progress we cannot safely part with an instrument which constitutes the most effective safeguard we have yet known both against superficial teaching and inadequate inspection.

This paper is written in the belief that such a safeguard may be provided by one thorough and well-considered final examination, adapted to test the result of the primary school course, at its ordinary termination about the fourteenth year. If the standard which a well-instructed child ought to reach by that age is once clearly defined, and teachers become substantially agreed as to the end to be attained: the

The limitations to its usefulness.

An English leaving certificate for elementary schools.



necessity of an authoritative annual examination in standards to a large extent disappears; the freedom of classification and the choice of methods remain with the teacher, and such communication to parents as is desirable respecting the details of a scholar's advancement from year to year may be left wholly to the local school authorities. But it is essential that the Education Department, which is responsible not only for the distribution of large public funds, but also for the maintenance of a high and improving ideal of elementary education in the country, should know from year to year what is the outcome of the methods pursued in the schools, and how many scholars are turned out fairly equipped with the instruction needed for the business of life.

certificates  
attainment  
special  
objects.

Separate certificates for proficiency in certain selected subjects, such as the Science and Art Department has been accustomed to award, do not wholly meet the need. The encouragement which has been given to elder scholars and pupil teachers to work for a science certificate, and as soon as it is obtained to try for another in a different subject, has not been helpful but often mischievous in its influence on the general education of the student. The practice of dealing with the parts of instruction piecemeal and making separate reports and payments in respect of each subject, has often served to dislocate the plans of good teachers, and to prevent them from considering the education of the scholar as a whole. The plan adopted by the Scotch Education Department of awarding to the scholar from a secondary school leaving certificates, *e.g.*, in mathematics, in Latin, Greek or English, at the choice of the candidate, may be justified by the fact that he has generally reached the age at which it is legitimate for him to select the subject in which he desires to distinguish himself. But such a leaving certificate carries with it no assurance that the holder possesses a good general foundation for a liberal education. And it would clearly not be a suitable precedent for the leaving certificate of the elementary school.

labour  
certificates.

Nor can the labour certificates at present awarded by the Department be regarded as a satisfactory test of school work from an educational point of view. So long as the Elementary Education Act of 1876, and the several Acts which regulate the employment of children in factories and workshops remain in force, the award of what are called "certificates of proficiency" must continue under the present conditions. But these certificates attest nothing but a meagre outfit of reading, writing and arithmetic. To "reach" a standard which will satisfy the Act of Parliament or bye-laws of a School Board district is to give little or no evidence of general knowledge or intelligence; and the state of the law and of public opinion which accepts the passing of the third or fourth standard in the three elementary subjects as a reason for the early withdrawal of a child from school to labour for which he is ill-prepared is as injurious in its effect on the schools as it is inimical to the true interests of the scholars and their parents. A legal minimum is often interpreted

by poor parents as if it were the maximum, or at least as if it were sufficient; and the official use of the word "proficiency" in connexion with the bare requirements of a low standard according to the first schedule in the appendix of the Code sometimes conveys, to those whose sympathy with educational authorities it is of the utmost importance to secure, a false and misleading impression. Moreover, the fact that the labour certificate has a pecuniary value and that to withhold it from a family struggling with poverty seems unkind or inconsiderate, often causes a not unreasonable leniency in the examination, and materially diminishes the educational value of the certificate. It may well be doubted whether the imposition of legal restraints and disabilities on ill-instructed children, or the encouragement of early exemption from school attendance in the case of scholars who happen to be precocious is or is not a wise expedient for securing the true improvement which we all desire. Probably it will be found in the long run that we may rely more safely on measures such as will serve to keep prominently in public view the goal which ought to be reached, and a just estimate of the work which throughout its whole course a good school ought to do for its pupils.

From this point of view, the merit certificate provided in the regulations of the Scotch Education Department deserves the attentive consideration of school authorities on this side of the Tweed:—Article 29 of the Scotch Code contains this provision:—

The Scotch certificate merit.

"A certificate of merit will be granted once only by the Department to any scholar over 12 years of age who satisfies the Inspector that he has attained a standard of thorough efficiency in the three elementary subjects, as well as in the class subjects (at least two) professed in the school.

"The managers will furnish a list (on a schedule supplied by the department on special application by the managers) of the scholars to be presented for merit certificates; and the teacher must certify to the character and conduct of each pupil admitted to the examination.

"The merit certificate will attest thorough efficiency in the three elementary subjects, and will state the class subjects and specific subjects (if any) taken by the scholar to whom it is granted. No merit certificate will be issued to a scholar who has not mastered all the standards set forth in Article 28 (elementary subjects) or who does not show ease and fluency in reading, considerable fluency in writing and composition, and the power of applying the rules of arithmetic in a way likely to prove useful in the common affairs of life. Some test of mental arithmetic will also be applied."

Thus the experience gained in Foreign countries, especially that of the *Certificat d'études primaires* in France and Belgium, coincides with that acquired in the northern part of our own island, and reveals the existence of a want which our English system does not supply. In seeking to apply this experience

Conditions be fulfilled in applying this experience to England.



to our own special circumstances and needs, two or three preliminary considerations appear to deserve some weight:—

(1.) The examination should not be competitive, and should not have for its prominent object the discovery or reward of exceptional merit. Its purpose should be to set before schools and scholars generally the nature and scope of a good elementary education, and to offer such a test as a boy or girl of average diligence and intelligence ought to attain.

(2.) No prize or immediate pecuniary advantage should be associated with it. No legal enactment need enforce it, and no penalty should be incurred by those who do not possess it. Its value should depend entirely on the quality of the attainments it professed to attest, on the fairness and thoroughness of the examination, and on the increased appreciation year by year of the worth of a good education on the part of parents and the public. Considered as an instrument for raising and maintaining the standard of instruction, the award of a leaving certificate should be regarded as an educational measure only; and the less teachers and examiners are liable to be influenced by compassion to individuals, or by regard to the pecuniary effect of the award, the better.

(3.) In measuring the claims of a scholar to receive a certificate regard should not be had to the number of subjects he takes up, or to the grants he has enabled the school to earn. Nor should any authority fix the relative importance of certain subjects, or seek to enforce, *e.g.*, in rural districts, the study of agriculture or in great towns, the study either of commercial account keeping, or of any particular local handicraft. The chief objects to be kept in view are to secure that a satisfactory use has been made of a good elementary course, and that this course, while including all the necessary rudiments of learning, shall leave room for optional subjects adapted, in different places, to the local requirements and to the particular aptitudes and qualifications of teachers.

These general conditions being premised, it remains to consider what it is that education—so far as its results are ascertainable by examination—should have accomplished for a scholar who quits an elementary school at the age of thirteen or fourteen. We cannot escape the enumeration of details or the authorisation of some sort of syllabus, although we may admit that the attention of teachers has too often been directed rather to the list of separate subjects than to a rounded and complete scheme of discipline and training as a whole.

Now the curriculum of every school ought to comprise:—

- (1.) Reading, writing, and arithmetic, as laid down in the several standards of the Education Department, up to the seventh.
- (2.) The English language, with the elements of grammar and exercises in English composition.
- (3.) The outlines, at least, of British geography and English history.

the ideal  
primary  
school course.

- (4). The rudiments of physical and experimental science.
- (5). Some acquaintance with good literature, and the learning by heart of choice passages from the best authors.
- (6). Drawing, needlework (for girls), and for boys some other form of manual instruction.
- (7). Moral and religious instruction.

This item is not placed last through any doubt of its supreme importance, but simply because of the impossibility of estimating it accurately, and because, even if it admitted of exact measurement, the officers of the State are not the persons to perform the task.

In regard to the items marked 1, 2, 3, and 5, it is reasonable to expect that satisfactory evidence of a tolerably uniform kind might be expected from all candidates alike. As to 4 and 6, considerable diversities of plan and practice may properly be looked for and encouraged. In science, for example, one school may cultivate mechanics, chemistry, or some other subject having a visible and immediate application to industry and to success in business; and another may prefer the sciences which, intellectually, have a higher value, though they have no obvious bearing on money-getting or the business of life. It may suffice to mention two examples of what is here meant. Natural history—the study of plants and animals, the classification and arrangement of specimens—is well calculated to exercise the observant faculty, and to train the scholar to accuracy and to systematic thinking, although its immediate utility is not obvious at first sight. Astronomy, too, has been strangely neglected in school *curricula*, probably because it is of no commercial importance and no prizes are obtainable for pursuing it. Yet there is no study better calculated to exalt the imagination, to enlarge the mental horizon of the student, and to help him to know the universe he lives in, and his own place in it. A teacher who is interested in this subject, and who helps his scholars to observe the motion of the stars, to discriminate fixed stars from planets, and to know something of the moon and its phases, ought to find that his efforts are encouraged and that any results he can achieve are duly recognised.

Besides its regular course of lessons, as prescribed in its time-table, every good school ought to do something to call forth latent power and sympathy, and to stimulate the love of reading and inquiry, and the desire for further knowledge. The teacher who devises any new plan for securing these objects should have the opportunity of submitting his plan to the official examiner, and securing due credit for any optional subject which has a truly formative and educational character. In no other way can we hope to escape from a stereotyped and barren routine, and to enlist in the development of national education the sympathies, the inventiveness and the varied knowledge of the best teachers.

It is highly desirable that some part of the examination should be oral, and should be designed rather to test a scholar's general intelligence, his knowledge of the meaning of what he reads,

Some optional subjects.

Oral examination.



his power of expression and his interest in his school work, than the accuracy of his information. It is also important that a certificate of good character and attendance at school should be a condition precedent to admission to the examination.

the relation  
between  
school and  
home.

One great need in our present social and educational arrangements is the establishment of closer relations between the school and the scholar's home. The public opinion which in Scotland, and in France, Germany and Switzerland, has led to a high appreciation of the blessings of a good education, hardly exists to the same extent among the poorer English parents, although it is yearly becoming more pronounced. It is greatly helped by school lending libraries, by school savings banks, by scholarships and exhibitions obtainable by merit and tenable in technical or other higher schools. It was in some degree assisted by the now disused duplicate schedule, which furnished year by year particulars accessible to the parents, and enabled them to tell the progress of their children. It would probably be helped yet more, if as in America the parents were annually invited to a public ceremony, at which opportunity was afforded to see something of the methods pursued in the school, and of the results produced. But it would be most effectually encouraged, if there were—clearly set forth, and intelligible to the public—a standard of attainment which every scholar ought to reach before quitting the elementary school, and if the co-operation of the parents were sought in the efforts of school authorities to maintain that standard. It is to be feared that among the wage-earning classes there is at present a very imperfect recognition of the fact that the practical difference between the successful and the unprosperous man, is largely dependent on the time spent in preparation for the business of life. Every year at school adds to the worth of a youth on entering the labour market, and gives him a better chance of future advancement. And as it would be a serious mistake to increase the inducements to shorten the period of school life, the Leaving Certificate should not be granted before the end of the thirteenth year, and should always be given on conditions which pre-suppose regular application up to that age.

the Certifi-  
cate to be  
granted by  
the State,  
rather than  
by local  
authorities.

It may be added that the value of the certificate would be far greater, if it were granted under the direct authority of the State, than if School Boards, Managing Committees, or individual teachers awarded it. There would be better security for the maintenance of a uniform and impartial standard, and for the absence of local and personal influence. Moreover allowance must be made for a very natural and not unreasonable sentiment, which causes the average parent and scholar to regard a certificate signed by a public officer, such as Her Majesty's Inspector of Schools, as a document possessing special dignity and as an object of honourable ambition.

In summing up the purpose of this brief paper, it is right to add that the measure here advocated, is only one of many expedients by which the progressive improvement of our system



of public instruction may be secured. It is not a panacea. It will not by itself solve all the practical problems which await the educational reformer of the future. But we are entitled to indulge in a hopeful view of some of its probable consequences, if once the principle on which it rests were officially recognized, and publicly approved. It would certainly have the effect of defining more exactly the course of instruction which should be adopted in public elementary schools; and would afford an additional and much needed safeguard for thoroughness and exactness in instruction. It would help teachers in securing discipline and regular attendance, if they were able to say that without these they would not feel justified in certifying that the scholar was eligible to be examined. It would arouse the interest and the sympathy of the parents, and give them a new motive for co-operating with the school-teachers. It would greatly facilitate the work of secondary and technical schools, by furnishing them with an appropriate entrance examination. It would help the employers of labour to discriminate among the applicants for situations. And it is not too much to hope that by degrees the influence of the system would serve to make clearer in the eyes of the public the relations between character, knowledge, and intelligence, on the one hand, and, on the other, the honour, prosperity, and usefulness of the citizen's life.

May, 1898.

J. G. FITCH.

THE  
TEACHING OF MODERN LANGUAGES  
IN  
BELGIUM AND HOLLAND.

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## The Teaching of Modern Languages in Belgium and Holland.

### I. Belgium.

scope of  
enquiry.

In enquiring into the methods of teaching modern languages in Belgian and Dutch schools, my chief object was to ascertain, if possible, what special means were employed to secure that greater facility in *speaking* foreign languages which undoubtedly exists among the present generation of Belgian and Dutch ladies, and in a less marked degree perhaps, among men also, when compared with our own powers.

Vant of  
practical  
knowledge  
of modern  
languages in  
England.

English girls, on leaving a good school, usually have a fair knowledge of French Grammar, and often of German, and have read intelligently some literary masterpieces; but it is a melancholy fact that when girls who have passed even the Cambridge "Higher" Examination are confronted with a foreigner, they are usually unable to understand, or to speak intelligibly; while with boys the case is even worse, for they have often only a very imperfect knowledge even of the written language.

reasons for  
this.

No doubt allowance must be made for our national character, with its unfortunate self-consciousness and *mauvaise honte*, amusingly noted many years ago by that gentlest of satirists, Cowper, in his "Conversation":

"Our sensibilities are so acute  
The fear of being silent makes us mute.  
We sometimes think we could a speech produce  
Much to the purpose, if our tongues were loose;  
But being tied, it dies upon the lip,  
Faint as a chicken's note that has the pip. . . .  
Few Frenchmen of this evil have complained;  
It seems as if we Britons were ordained,  
By way of wholesome check upon our pride,  
To fear each other, fearing nought beside.  
The cause perhaps enquiry may descry,  
Self-searching, with an introverted eye,  
Concealed within some unsuspected part,  
The vainest corner of our own vain heart."

We may also claim that English is understood and spoken over so large an area, as to make it apparently less necessary for us to learn other languages; but this is a humiliating position to take up; and we must remember how much is lost to a traveller who only understands what is said directly to him, and cannot follow the conversation going on all around him. We may take refuge in our insular position; but surely that is no reason for 'insular' ideas, a more developed form of that 'provincialism' of which Matthew Arnold so hotly accuses us. We may doubtless find excuses for ourselves; but if we search for causes, may there not be defects in our method of teaching? We have for centuries attached deservedly great weight to the study of Latin and Greek; have we not carried on into our teaching of modern languages the time-honoured methods which have proved successful in the case of Classics, without taking into account the

essential difference between living and dead languages? For since the object to be attained is different, so also should the method of teaching be modified.

To amend this defect, it is obvious that in the future we must look for different qualifications in our *teachers* of modern languages, and must introduce oral tests in our principal examinations.

In the interest of such an enquiry as I proposed to myself, two dangers lurk on the very threshold. The freshness and consequent attractiveness of new methods may make us too ready to identify novelty with wisdom; and there is the still greater danger of generalising too rashly on insufficient evidence. Difficulties of enquiry.

I will endeavour to guard against the first by simply stating facts, and abstaining as far as possible from inferences; and, with regard to the second, I will at once name my chief sources of information, so that their value may be approximately weighed. Sources of information.

(1) In Belgium I visited nine schools of various grades, in Brussels, Ghent, Bruges, and Antwerp, and heard twenty-two lessons in English, German, and French to Flemish pupils, to whom it was a foreign language. The schools were as follows:— Schools visited.

- Brussels. Two Écoles Primaires. (Boys and Girls.)
- "      Two Écoles Moyennes. (Girls.)
- "      One École Professionnelle. (Girls.)
- "      One Section Normale. (Girls.)
- Bruges. One École Normale. (Girls. Convent School recognised by the State.)
- Ghent. One École Normale. (Boys.)
- Antwerp. One École Moyenne. (Boys.)

(2) I enjoyed valuable opportunities of gaining information from experts, such as the organisers and inspectors of Primary and Secondary Education; and from the Directors and staff of the schools visited, all of whom showed the most courteous and ready desire to assist me in every possible way. And in conversation with thoughtful and intelligent persons taking a general interest in education, I learnt much of value as to the popular unprofessional view of the question; and I was struck by the knowledge and interest displayed by such persons in the subject of national education of all grades. Other sources of information.

(3) I was liberally supplied with printed matter, Reports, Instructions to Teachers and Inspectors, Historical Surveys, Discussions on questions of principle, and the like. Both the amount and the character of these impressed me very much; while always starting with defined general principles, they relate all details to these with the greatest care, and are distinguished by a sympathy and human feeling not always present in official documents.

The teaching of modern languages in Belgium is beset with peculiar difficulty; not only is it a bilingual country, but race-feeling is strongly developed. Of late years a very interesting "Mouvement Flamand" has sprung up, and has been instrumental in leading the Government to take measures for ensuring as good Situation in Belgium.



teaching in Flemish as in French in all parts of the kingdom; and at the University of Ghent a Chair of Flemish Language and Literature has been founded.

No doubt politics have something to do with this movement. Until lately popular leaders and orators have been for the most part French-speaking, while the best literary men have chosen French for their vehicle of expression, as appealing to a wider audience. There is a not unnatural desire now to train educated men who can speak to the people in their own language.

In 1883 a law was passed increasing the amount of Flemish teaching in Belgium, and was followed by others, making a knowledge of Flemish compulsory for all candidates for Government appointments; and now French and Flemish are compulsory in schools either maintained or recognised by the State or the Communes. In Higher Grade Schools a third language, English or German, is added, while in the *Athénées*, Latin, and in many cases Greek, is taught. It will therefore be apparent that only very good teaching will secure adequate progress in so many languages.

### 1. Teachers.

chers.

Turning now to details. As the teachers are the most important factors in the teaching, I propose to consider them first, under the following heads: (a) Nationality; (b) Training; (c) Examination.

ionality

(a) *Nationality*.—When I commenced my enquiry I was strongly in favour of a teacher teaching only his own language; but in Belgium I found a singular consensus of opinion in favour of Belgian teachers, and from what I saw and heard, both there and in Holland, I have changed my opinion, on the following grounds:—

- (i.) It is far harder for a foreign teacher to maintain discipline, owing to imperfect understanding of the character of his pupils; while his foreign accent and the mistakes he is liable to make in their language are apt to expose him to the ridicule of the children.
- (ii.) A foreign teacher cannot enter thoroughly into his pupils' special difficulties nor detect their source, which often springs from applying the rules of their own language to another of different construction; the corrections given by a foreigner will then often appear arbitrary, while a native can explain just where the difference comes in.
- (iii.) Experience has shown, though with many brilliant exceptions, that it is not always easy to tempt the *best* teachers to leave their own country. Sometimes failures at home are apt to go abroad, under the impression that they can at least teach their own language, even if they have neither training nor experience.

On the other hand, there must almost inevitably be a slight sacrifice in accent and idiom; but a fair acquaintance with idiom can be acquired by a comparatively short residence in the country;



while it is so rare for a foreigner to obtain an accent such as will deceive a native into hailing him as a compatriot, that it is merely a question of a *more or less* good accent; and I think fluency of speech and a real knowledge of the language may well be prized above accent. The habit in Belgium seems to be to choose Belgian teachers who have spent some time abroad, and who frequently spend their holidays in travelling; or in some cases, the children of mixed marriages.

It is worthy of note here that a large and increasing number of teachers from all countries take advantage of the summer meetings now organised at Cambridge, Oxford, Edinburgh, Paris, Caen, Jena, Greifswald, &c.; and that this year a hundred and fifty teachers were drawn to Oxford from ten different countries to attend a course in England by Dr. Sweet.

It is much to be wished that small travelling scholarships should be given to teachers of modern languages to go abroad and study not only languages but methods. Belgium does not as yet do so much in this way as some other countries, although scholarships of at least 2,000 frs. are given to young Doctors of Philosophy, Letters, Law, and Medicine, who have specially distinguished themselves at the Universities, to enable them to study for another year or two in a foreign country; these are awarded by competition and are not very numerous. I am informed now that the Conseil de Perfectionnement has recommended to the Government the establishment of small scholarships of about 400 frs. for teachers actually employed in teaching modern languages, to enable them to attend the summer meetings in foreign countries in greater numbers.

It would be a great advantage if greater facilities existed for English teachers to study foreign methods on the Continent and in America. At present, if a teacher is willing to bear the expense of the journey, salary must also be sacrificed. It seems to me that few methods of expending money would be more remunerative than to establish travelling scholarships; and a little money thus spent would go a long way.

(b) *Training*.—In Belgium, teaching is an open profession; Training. but no one can teach in a State school without a diploma, and in any communal or private school recognised by the State, at least half the teachers must have a certificate. *Écoles Normales* are provided both for Primary and Secondary Teachers; the former *must* pass through a Training College to obtain a diploma; but the latter may be admitted to examination without regard to the place where they have obtained their knowledge.

(i.) Taking Primary Training Colleges first, there are eight Primary Training Colleges. State Institutions, five for men and three for women; there are also thirty-six Training Colleges recognised by the State, both Communal and in connection with religious houses, twelve for men and twenty-four for women. Also some schools have a normal section attached to them; two such exist for men and three for women; total, forty-nine training colleges in all.

The entrance age of students must not be less than fifteen

nor more than twenty-three; the former is more usual. The course of training lasts for four years, and seems to be carefully adapted to develop both general culture and teaching power; e.g. a ministerial circular impresses on the teaching staff the necessity of encouraging a large amount of personal effort and initiative in the students themselves in carrying out their own education; the Socratic method is to be largely practised, and *personality* is to have free play: "A good teacher for a normal college must be a patient initiator of intellectual interests, rather than a deliverer of set lectures. He knows that it is far more important to stimulate mental spontaneity than to increase receptivity." Great stress is laid on the need for *literary* training; "lessons may be accurate, painstaking, clear, exhaustive, but wholly unattractive; what is wanting is 'le souffle littéraire.'" If this literary breath does not vivify thought, it is deprived of the power of communication, it will not impress itself strongly on the minds of the listeners, for "literature should be not only the ornament, but the instrument of the mind."

Teaching of  
Languages.

These ideas are exemplified in the teaching of languages. Every student enters with a fair knowledge of French and Flemish, having in school devoted from three to four and a half hours a week to that language with which he is at least familiar, and in the Training Colleges about half the students take up a third language. The time given to the study of the secondary language (French for Flemings, and Flemish for Wallons) is three hours a week during the first three years, and two during the fourth. The course of teaching prescribed is practical, varied, and interesting. In each year *conversation* is insisted on; exercises are done *viva voce* as well as in writing; short anecdotes and descriptions are given orally by the teacher, and are made the subjects of informal talks between him and the class; parsing and analysis are done orally; great attention is paid to accent and elocution; chosen books are read, and an account of them is given verbally; the composition and derivation of words is taught; and special importance is attached to paraphrasing and synonyms. The teacher gives his whole lesson in the language he is teaching, and avoids translation as far as possible, explaining by periphrases or synonym, and never asking the class to explain in their mother-tongue; he will rather say, "Can you put that in other words?"

Each year's Programme goes over much the same ground, but the difficulty is carefully graded; and in this way the language is treated from the first as an organic whole, which is studied in closer detail as the students progress. During the first two years the Programme which the students will have to follow in their future schools is carefully and systematically explained, showing it to be no mere arbitrary regulation, but a well-conceived plan based on scientific principles.

Practising  
school.

Attached to every State Training College is a practising school, where every student hears model lessons, and every week himself gives six half-hour lessons before his fellow-students, who criticise,



while certain chosen students take down in writing an account both of the lesson and the criticisms. The subject of the lesson is given out two days before, and is prepared by all the students, the one who finally gives it being chosen by lot on the morning of the day itself.

The students have all to prepare their lesson in writing, and submit it to the teacher, who returns it the same day with corrections and suggestions, and the students modify their work in accordance with these. Every student also corrects, under supervision, a certain number of exercise books of the children in the practising school.

(ii.) Turning now to the Training of Secondary Teachers, the question was considered by the Government as long ago as 1850, when courses were established to prepare teachers for the *Athénées*, Colleges, and *Écoles Moyennes*; but in 1890 these were suppressed, and special sections for secondary teachers were established alongside of those for primary teachers, at Nivelles and Gand for men, at Liège and Brussels for women. It will be seen at once that this provision is very meagre in comparison with that for primary teachers; the teaching is sometimes only for day students, as at the admirable school of Mlle. Gatti de Gamond in Brussels; and a practising school is not a necessity, though provision is made for practical teaching in the *École Moyenne* to which the normal department is attached. The University degree of Doctor in Philosophy, Physical Science, and Mathematics, or in Natural Science, confers the right to teach, without certificate of training in method; and, as has been already said, students may be admitted to the examination conferring a teaching diploma without regard to the place where they obtained their instruction.

Training of  
Secondary  
Teachers.

Those students who enter the Higher Grade Training Colleges do so at the age of eighteen. In the schools they have been well taught two, and probably three languages, boys having devoted from six to eight hours per week to each obligatory language, and girls six.

Both for men and women the first year's work is common to all students; it includes French, Flemish, German or English, with the option of taking both. The course of study comprises Reading aloud, Recitation, Pronunciation, Grammar, Literary Analysis, Composition, History of Literature, and a knowledge of several set books. One significant omission may be noted; translation, whether from or into the foreign language, plays a comparatively small part, the idea being that the whole time available should be devoted to the foreign language, accustoming eye and ear to its use without the medium of the mother tongue. All words are but symbols of thoughts, and translation is practically the interposition of two symbols between the thought and its expression. By substituting synonym and paraphrase for translation, the student spends his whole available time in, so to speak, manipulating the foreign idiom.

Teaching of  
Languages.

At the end of a year's study, students who pass the requisite examination proceed to more specialised study. For men there



are two sections, the humanistic and scientific; for women, a third is added of modern languages; students in this section are allowed to drop history and geography, and devote the time thus gained to languages.

## Time Table

In the first year all students devote four hours a week to French and to the secondary language (Flemish or French as the case may be) and two hours to the third or fourth (optional) language. In the second year all students give two hours a week to French and Flemish; the men who take the humanistic section devote in addition four hours a week to French and the elements of comparative grammar, and three to a secondary language. Women give six hours to French and three to the second language; while those who take up the modern language section, devote three hours a week to each of the four languages, French, Flemish, English, and German, and their respective literature.

Practical teaching is not neglected. During the first six months the students hear a model lesson weekly, and attend lessons during two hours a week in the practising school, taking notes, which are revised by the master of method. During the second six months the students give criticism lessons before their fellow-students and teacher, and themselves take classes in the preparatory section of an école moyenne.

## Examinations in Primary Training Colleges.

(c) *Examination.*—The difficulty felt by all thoughtful students of education, how to make examinations a stimulating test and not a cramping restraint, the handmaid and not the despot of education, has been fully realised in Belgium, and great pains have been taken to minimise the danger, by insisting that the examiners should frame their questions strictly on the prescribed course of teaching, rather than that teachers should be obliged to restrict their efforts to meeting the requirements of a "cut and dried" examination. But the examinations in Training Colleges are very frequent. Besides those at entrance and on leaving, they are held every six months. Restricting myself to the subject of modern languages and speaking first of Primary Training Colleges, I find that at the Entrance Examination a second language is optional, but if offered, there must be an oral as well as a written test, comprising reading a passage aloud, and giving a summary of it; and the candidate who cannot answer questions in the foreign language can only obtain three-quarters of the possible marks. The written test comprises dictation, grammatical questions bearing on the passage, and an easy translation.

At the end of the first six months the second language, which was optional, becomes compulsory; the actual subjects are the same at each six months' interval, but the standard is raised; and a choice is given between translation, and composition on a set subject. During the first year only, the candidates are allowed the use of a dictionary.

At the leaving-examination the punctuation is not given in dictation, and in the *vivâ voce* test a higher standard of literary attainment is required; for after reading aloud a passage from one of the set books, the candidate is required to explain not only its meaning but its literary form and characteristics. Before reading it, ten minutes are allowed to consider it, but without the help of any other notes than those given in the book itself. At

every examination a candidate must obtain 65 per cent. of the marks for a pass, and 75 for distinction.

The Director and staff of the college form the examining body; Examining Body. but at the entrance and leaving examination the Inspector of Training Colleges, or one of the Primary Schools' Inspectors, is added. Among the Instructions to Examiners the following occurs:—"The questions are to be framed in such a way that the answers may give evidence that the prescribed courses of study have been followed both in letter and spirit. In making their awards the examiners must consider the interests of education as well as of the examinee; they must be both impartial and considerate."

In the same sense also is an admirable paragraph taken from one of the Primary School Inspector's reports. He says:—"At the entrance-examination the Board of Examiners should especially set themselves to find out the moral and intellectual condition of the candidates. Insufficient attention to this recommendation accounts for many of the failures at the end of the first year. Even then, all candidates should be resolutely refused if it be found that they have not justified the examiner's first report. It is much to be regretted that, owing to an indiscreet laxity, students are even allowed to continue the third year of training who ought, either on account of incapacity or want of vocation, to be definitely rejected at an earlier stage, but who are allowed to offer themselves for the final test with the certainty that they will either fail, or will scrape through and obtain a certificate for which they are unfitted." All who have any experience in such matters know how real a danger is here pointed out.

Turning now to the examinations in Secondary Training Colleges, I find a somewhat elaborate system. Here also there is an entrance examination, partly written, partly *vivâ voce*. The written work lasts eight hours divided over two days, the *vivâ voce* two hours, of which twenty minutes are devoted to the second and third obligatory language in the case of girls, half an hour in the case of boys. The questions are put in the language which is the subject of examination; and all students must obtain 65 per cent. of marks for a pass. Examinations of Secondary Teachers.

At the end of the first year, residence in the College is no longer compulsory to those young men who pass the examination, which gives them the title of provisionally-certificated teachers; for girls, as we have seen, residence is not contemplated at Brussels, though it is compulsory at Liège, and at the end of the first and second years an examination is held covering all the branches of study. In the case of girls, at the end of the second year there is a supplementary examination in languages only; the written examination lasts three hours, and the *vivâ voce* one hour, for each language offered.

Male students desiring to obtain a diploma without passing through a training college must also pass two examinations at an interval of at least a year; the first gives them the title of Aspirant-Professeur, the second makes them Professeur-Agrégé; in each case the written examination lasts nine hours, and the



*vivâ voce* at the most two hours and a half. Two languages at least must be taken, chosen according to the locality where the candidate proposes to teach. The subjects of the first examination comprise composition, grammar, literary analysis; in French, the History of Literature from Malherbe to the end of the eighteenth century; in Flemish, that of the sixteenth and seventeenth centuries. The second examination is divided into two sections—the scientific and the literary. In the former French (or Flemish) composition is required, and French literature of the nineteenth or Flemish of the eighteenth and nineteenth centuries, together with one other language. In the literary section, versification, literary analysis, and literary history are added, and historical and comparative grammar. Female students can take modern languages as a special section, in which case a more detailed knowledge of the same subjects is required.

Higher  
Examination  
in Languages

Finally, there is a "Higher" examination in languages alone, to which men and women are admitted on equal terms. One or more languages may be taken. The written examination lasts six hours, and comprises a composition, a literary analysis, and the grammar and structure of the language chosen; the *vivâ voce* lasts two hours, and includes translation and literary and grammatical explanation of a prepared book; unseen translation; questions on the literary history of the language offered, and a lesson given on a literary or grammatical subject announced twenty-four hours previously. All *vivâ voce* examinations, it should be added, are public. Such are the measures taken in Belgium to provide qualified native teachers of modern languages, capable of teaching them both scientifically and conversationally.

I will now try to describe how these teachers work.

I had the privilege of being present at nine lessons in Normal Colleges, six to girls and three to boys. All were admirably given; and it was very instructive to note how varied they were, and how strongly impressed by the personality of the teacher, while all were more or less influenced by the so-called "direct" method of teaching, showing how unity of purpose may be maintained while uniformity of process is avoided.

"Direct"  
Method of  
Teaching  
Languages.

Perhaps here it may be well to explain exactly what is meant by the "direct" method. This is the official definition taken from the Programme of Teaching to be given in the Communal Schools of Brussels:—

"The teaching of the second language (French or Flemish, according to the locality) should be given by the 'direct' or 'natural' method. This method consists in teaching a foreign language without having recourse to translation, except in special cases; and even then a direct and intimate connection should always be maintained between words and ideas. The lessons should deal with things familiar to all the children (the family, clothes, furniture) or with things which have already been made the subject of lessons in the children's own language. Thus the whole attention can be concentrated on correct pronunciation and the construction of the sentences. Care should be taken to keep before the children the objects which are mentioned, either



by models, or pictures, or blackboard illustration. To make the verbs intelligible, the actions spoken of should be performed as far as possible. With regard to adjectives, several objects should be shown which contain common qualities. In a word, the teacher should proceed as far as possible by the best of all methods, viz., that which a mother intuitively uses in teaching her children to speak."

In the Section Normale at Mlle. Gatti's school I heard a most spirited lesson in German to first-year students on German Ballads, showing their influence on English and German literature, comparing those of Schiller and Goethe, and bringing out the mutual influence of the two writers. The lesson was almost a lecture of the University Extension type, given entirely without notes, with immense energy and enthusiasm, riveting the attention of the girls. In this particular case the teacher was a German, and she illustrated her lesson by personal references, and explanations of national life and customs, occasionally breaking off with a rapid question to one or another, which was answered without hesitation in German. It was a lesson of high literary merit; and the girls were expected to write their recollections of it from memory, for they took no notes.

German Lesson in Training School for Secondary Teachers.

In all cases in Belgium I was struck by the comparative absence of text-books and primers. In preparing a set book no special handbook seemed to be used; each teacher carefully prepared her lesson, using freely the school library, and herself drawing on many sources of information which would be inaccessible, and perhaps unsuitable, to the girls. This practice entails much effort on the part of the teacher, but gives great life and freshness to the teaching, throwing the girls more on their own resources, and forcing them also to do more independent work than if they "got-up" a text-book.

I heard also a lesson to second-year students on "The Merchant of Venice"—a thoughtful lesson, stimulating, and full of careful *teaching*; and I was fairly amazed at the knowledge the girls showed, not only of that play, but of English literature in general.

English Lesson to Second Year Students.

First an account of the story was given, main plot and incidents being clearly distinguished. One after another took up the thread, not in order as they sat, but as the teacher directed. She cleverly drew out expressions of personal liking from the girls, who compared and contrasted the characters and discussed ethical questions freely as they were suggested. Then each girl was asked to repeat a favourite passage, and each chose a different one, and said it clearly and intelligently. The teacher most kindly encouraged me to talk to the girls and ask them questions. She then put some general questions on English literature, covering a wide range of time from Chaucer to Dickens, whose "Hard Times" they had just read. They were familiar with the names and general characteristics of the principal writings of Bacon, Spenser, Milton, and Bunyan. After a little natural shyness they seemed glad to talk to an English lady, and were interested and pleased to find they could follow easily with-

out their books my reading of a passage from "The Merchant of Venice." Though they spoke English somewhat slowly, their accent was in most cases excellent, and they spoke very correctly; though an initial aspirate seemed a great difficulty to some, greater even than the *th*. Throughout the lesson not one word was spoken by teacher or girls in French.

training  
college at  
Bruges.

German  
lesson.

At Bruges I was allowed to visit the Convent School of the "Dames de Saint André," who have a Section Normale attached to their École Moyenne. Here I heard two lessons in German and two in French to Flemish students. In the first German lesson explanations were given in French, but the lesson on "Wilhelm Tell" to more advanced students was all in German, and the technicalities of verse measures were very carefully dealt with.

The French lessons were extremely brightly given, one on a fable of La Fontaine, another on a difficult French poem. I noticed the constant use of synonyms in explanation, and the advantage of a teacher who, being herself a Fleming, could say, "Now you must be careful here, for the French construction differs from the Flemish:" while any tendency to explain a French word by a Flemish equivalent was at once checked, and a synonym asked for, or a paraphrase.

training  
college at  
Ghent.  
French  
lesson.

One of the most interesting lessons I heard was at the magnificent Normal College at Ghent for men, where a Flemish master gave a French lesson in excellent accent to a Flemish class in a manner which made great demands on their imagination. They were lads of about eighteen, and the master asked them to imagine that during the holidays they had been present at a *fête* to celebrate the silver jubilee of a village schoolmaster.

So the first student began without hesitation in French: "During the holidays I was present——"

"What holidays?" interrupted the master; "in the summer the *fête* would be out of doors, and in winter in the school." So the lad started again, "During the Easter holidays," and each student, at a sign from the master, took up the story, and the class gave quite an interesting little picture of village life, with minute details of the crowds, of the parents of the present generation formerly themselves pupils, of the decorations, and the flowers and addresses presented, and the pride of the wife and family, and so on, till it fell to the last student to represent the Mayor and make a little speech. Whereupon the Director of the College, who had been sitting by me listening with evident amusement, interposed with the remark, "Now I am sure the Mayor stood up to make his speech;" the hint was at once taken, and, without any self-consciousness, the lad rose and made a very neat little speech.

It may be said that foreign nations have more natural gift for acting than we have; but it must be remembered these boys were of Germanic race, and they are not usually credited with special oratorical or dramatic talent. The lesson seemed greatly to amuse the class, and there was no attempt whatever made to check a slight laugh which arose now and then; and the lesson

was certainly an admirable exercise in imagination and in fluent expression of thought.

At the end the master summed up with a lesson on style, pointing out omissions, and showing how some points might have been more strongly brought out, and others less emphasised.

In the same college I also heard a lesson in English to first-year students, and in German to those of the second year. English Lesson.

In the first case the master told short anecdotes, rather slowly, explaining an unfamiliar word by paraphrase, or another instance of its use, giving grammatical explanations, asking questions as to the derivation and composition of words, putting all his questions so as to necessitate answers of some length. Not till the anecdote had been thoroughly explained and orally reproduced were the students allowed to read it for themselves. This they then did, with a good accent, but a tendency to drop *h's*. They were provided with note books in which to enter new words or rules.

The German Class were of course reading more advanced extracts from good authors; they were questioned more on grammar, and much attention was given to style. They recited several poems with spirit, showing careful *drilling*, which however had not effaced personality and was no mechanical reproduction. German Lesson.

The premises, equipment, and teaching throughout the Normal College at Ghent were first-rate; the gymnasium was one of the finest I have seen anywhere, and all the teaching seemed to be especially intelligent and educational. The manual work, too, reached a very high standard, and was turned to double account, for all the carpentry was either in the form of small models, or else illustrated some mechanical principle. The social life, too, among staff and students seemed strongly developed; and I was interested to hear that many of the students saved money to take an educational tour in a foreign country; *e.g.* under the guidance of the director, a party had visited England not long before.

## 2. Methods of Teaching Modern Languages.

(a) In Primary Schools.

(b) In Secondary Schools.

Modern Language Teaching in Primary Schools.

(a) *Primary Schools*.—In these, as has been already said, French and Flemish are both taught; and the Programme of Studies (as we should say, the Code) lays down emphatically that the teaching is to be on the "direct" method (see *ante*, p. 658). During the first year *no books* are to be used; translation is not practised by the children till the third year, and then is only verbal; but special attention is drawn to cases where the construction of the foreign languages differs from the children's mother tongue. In the fourth year translation is practised, and children are taught to use a dictionary.

In the Instructions to Teachers in the Brussels Schools excellent general rules are laid down at the head of each subject. Taking some which refer to language teaching, I find the following:—

"Correct *pronunciation* and distinct *articulation* must be



insisted on, and a sing-song 'school tone' must be avoided. From the first the children must be taught to speak audibly, and if possible to recite standing. The practice of reciting in the Playground is to be recommended, as there the distance between the child and the teacher can be gradually increased, while equal clearness is insisted on.

"With regard to *reading*, the children should be encouraged to read at home portions of books recommended by the teacher, to whom they should give a verbal account of what they have read; the teacher should try to secure ten minutes' reading aloud by the children every day at home, the time at his disposal being too short for adequate practice of this art.

"*Grammar* in Primary Schools is taught for *practical* purposes; the science of grammar belongs to a higher grade of teaching. The teacher therefore will restrict definitions and rules within the narrowest possible compass; those that are necessary should be expressed very simply, and should not be taught dogmatically; but examples should be carefully chosen from which the rules can be deduced.

"*Parsing* should be done chiefly orally; if written, conventional abbreviations should be used; it is waste of time to write out the whole in detail.

"In teaching *Analysis*, the sentences to be analysed should always express some useful and interesting idea, and the meaning should always be clearly explained before analysis is attempted.

"In a Primary School, the object of *written exercises* is to lead the children to think, to classify their ideas, and to express them clearly and correctly in writing; they should not attempt to attain the height of literary compositions. The subjects set should always be within the children's scope, and such as will train them to express *their own ideas*. Care should be taken to avoid subjects likely to pervert the imagination, or to lead to the reproduction of platitudes. The lessons given in geography, science, history, the ideas suggested by the school walks and excursions, family and public events, descriptions of pictures seen, will supply suitable subjects for written exercises. The subject should first be treated *vivâ voce*, and the teacher should strive to stimulate thought, and will draw attention to the principal and subordinate ideas, their connection, and the right way to express them. After this the chief points will be summarised in writing on the blackboard, and the children will use the heads thus given as a guide. In the higher classes the children should draw up their own plan of composition. Every exercise should be separately corrected, the teacher drawing attention by conventional signs to mistakes in spelling and construction, omissions, incorrect ideas, and so on. A corrected copy will be made by the child and shown to the teacher, and if he approves it will be finally transcribed."

It will be obvious that many of these instructions can only be applicable to classes of moderate size; and in the Brussels Communal Schools the classes do not average more than thirty to forty. The instructions seemed to me worth quoting as an

illustration of the way in which minute details are referred to general principles.

I will now describe in detail two language lessons which I heard in Primary Schools in Brussels. I purposely chose young classes, wishing to see how the difficulties of the initial stage were met.

In the Ecole Communale of Brussels, rue de Six Jetons, I heard a French lesson given to Flemish children about nine, most of whom had learnt about eighteen months. A large coloured picture of a goat was put up, and in clear, rather loud tones, marking the syllables very distinctly, the teacher asked, "Mes en-fants, que voy-ez vous?" Numberless hands went out, and a child being indicated answered "Une chèvre."

"Non, ce n'est pas une réponse, il faut une phrase." At once the child corrected herself, "Mademoiselle, *je vois* une chèvre." Then talking in French, with great animation, but slowly, the teacher drew out every possible fact about the goat, always insisting on complete sentences as answers, and gradually adding new words round the original phrase as a nucleus. It was an object-lesson, but primarily a language-lesson, and brought home very clearly how much translation can be avoided by the use of gesture and pointing. Each part of the animal was thus named, always giving, if possible, not only the article, but an adjective—*e.g.*, "How many legs has the goat?" Then pointing, "Voilà! une jambe, deux jambes," &c.; then adding, still pointing, "Two fore legs, two hind legs. Now, what are these two legs called?" And a child would answer, "Those two legs are called the fore legs." Then *action* was spoken of, and the difference between *walking* and *climbing* was explained in French and by action: "I *walk* across the room; the goat *climbs* up the rock." Then different words for eating: "We *eat*; the goat *browses*. We have a mouth; animals have beaks, snouts, muzzles, &c." The difference between *poil* and *cheveux*, between *foot* and *hoof*, was drawn out, different children giving instances, always in a complete sentence; so that by constant repetition of the same words in different connections the children learnt them not merely by rote but *in use*, and they became so familiar that they sprang to their lips with no pause at all for thought. The teacher encouraged the children to draw on their own experience, telling what they themselves had seen: "Where have you seen a goat? Was it a white goat?"—and so on. The whole time French was used only; once did the teacher use a Flemish word in explanation. Again and again came the question "Can you put that in other words?" and here I saw the wisdom of emphasising the study of synonyms. Once or twice a child was called up to write a word on the blackboard, and a new word would be written by the teacher. A little grammar was taught incidentally, as it arose out of the lesson; thus if a child omitted the *s* in the plural, the teacher would ask the class, "Is that right?" and when the mistake was corrected the teacher would ask, "Why do we put *s*?" and the answer would be, "We put *s* because there are several"—not the mechanical phrase, "*s* is



the mark of the plural"; and similarly, genders were simply corrected: "We say '*la table*' and '*le livre*';" so that when later the child learns the rules of grammar they will have a meaning for him, because he already knows them in action.

The children were very eager and interested, and perfectly *natural*, laughing merrily but not noisily. Their accent was wonderfully good, and great pains was taken with it, each syllable being carefully divided: "*la chè-vre brou-te*." After the lesson they sang a lively French song; indeed liveliness was the characteristic note of teacher and class, and it was evident that such a lesson was a welcome relief to the routine of *book-work*, and to the children almost as recreative as a game; while to the teacher it was hard work, for she was talking the whole time.

The next lesson I heard was at another Primary School in the Nouveau Marché aux Grains, and this time it was a French lesson to Flemish children mostly under eight, who had only learnt about eight months.

In this instance an outline picture had been lightly traced on a large sheet of paper, so as to be visible to the teacher, but not to the class. Then taking a stick of charcoal, the teacher lined-in one part after another, talking all the time and asking questions. The children watched one part after another, coming to light, with great interest. The picture was one of the milk-carts drawn by dogs, and the children were asked the names of other draught animals, and other vehicles; and one child was sent round to point out a horse among the pictures on the wall, saying, "*Voilà un cheval blanc*."

I was struck by the criticism on the lesson made both by the Director of the School and the Government Inspector who accompanied me. They said the teacher should have begun with the distinctive and not with the general features; not with the legs of the dog, which might have belonged to another animal, but with the head; not with the wheels, but with the body of the cart; because the object was to make the children observe accurately, rather than to guess ingeniously.

The boy seated on the box of the cart was made the text of a lesson on kindness to animals; and when the teacher asked what he ought to have done, there was a consensus of opinion that "*il aurait dû marcher*."

In noting here and elsewhere the remarkable results attained in conversational teaching, it is only fair to English teachers, and to the teachers of English and German in Belgium, to draw attention to the fact that while everywhere I found *good* progress, yet the greatest was undoubtedly in teaching French to Flemish classes. Now this is not hard to account for. It may be quite true that French is practically a foreign language to them; but it is one which surrounds them on all sides. As they walk in the streets they hear it, and their ears get used to the intonation; the names of the streets and shops, the placards and notices, are all in French; if they *wish* to talk it they have no difficulty in finding opportunities. They are in a very different position to English children learning French, who probably *never* hear one



word out of school; we can only with fairness compare them to Belgian children learning English or German. But even here, I am sorry to say, the balance is in favour of the Belgian schools. I know no English school where a French or German visitor would be so readily understood and answered as I was in Belgian schools of the higher grade.

(b) *Secondary Schools*.—As regards the teaching of languages, there is no official order insisting on any special method; there is therefore no absolute uniformity. But I was told that during the last twenty years a silent and gradual revolution has been taking place, by which the “direct” method has been adopted in school after school. In all those I visited this method was more or less completely in use; that is, the lessons were almost entirely given in the language which was the subject of study, and certainly in proportion as this was partially or wholly done the progress of the pupils was less or more satisfactory.

*Athénées and Royal Colleges*.—I had not the opportunity of hearing any lessons in the *Athénées*, but I made inquiries as to the time devoted to modern languages.

(i.) In the *Classical sections* in *Walloon* districts, seven hours a week are given to French in the first year, six in the second, and three in the five later years; in the second year five hours are devoted to Flemish or German according to the district; and a third language may be studied two hours weekly during the last four years. In *Flemish* districts, French is studied for six hours weekly during the first and second year, and then for three hours, the same time being given to Flemish or German.

(ii.) In the *Modern section* in the *Walloon* districts, French occupies eight hours a week for three years, then six, then five in the fifth and six years, and again six in the last year. Flemish or German is studied for six hours weekly for two years, and then for three hours, while two to four hours are devoted to a third language. In *Flemish* districts, French is taken for seven hours instead of eight during the first year, and this extra hour is devoted to Flemish, otherwise there is no change in the time-table.

It is curious to note in the *Athénées* the meeting of the old and the modern system. As with us, the influence of classical traditions is perceptible in the much more frequent mention of translation, while the modern system is influential in insisting on *oral* reproduction of the books read, of *viva voce* parsing and reading aloud. The teaching is literary as well as grammatical, the lives and works of chosen authors are studied, and the teacher is reminded that the object of learning modern languages is not only to read without difficulty, but to acquire sufficient acquaintance with idiom to speak and write with tolerable ease.

*Écoles Moyennes* for boys and girls.—The entrance age is 11 as a minimum, but is more often 12 or 13, and the course of study extends over three years. In the case of girls a *cours supérieur* is often added where girls can study up to 19, devoting most of their time to languages and history.

There is a preparatory section also attached to the *Écoles Moyennes*, to which children can be admitted at 6. The course followed in this preparatory school is the same as that of the primary schools, so that from the first French and Flemish must be taught, and English is often begun. An entrance examination

to the Écoles Moyennes is required, which includes an elementary knowledge of French and Flemish grammar.

Time Table.

The Time Table for boys assigns to French during the three years' course, eight, seven, and six hours respectively; and to Flemish or German six hours during the first two years, and in the third year it becomes voluntary; while during the last two years an optional language may be taken up, and three hours weekly may be spent on it. For girls, six hours are given to French through their whole three years; six to Flemish during the first year and five subsequently; while three may be given to an optional language during the second and third years.

The course of study is almost identical for boys and girls, and comprises reading aloud, pronunciation, syntax, *vivâ voce* parsing, and description of books read; easy compositions are written, including letters and descriptions of places and events; no set books are given, but selections from good authors are to be read. There is nothing novel in the course of study, but when seen in operation it becomes evident how much is done orally, which might be and often is done in writing. It is curious evidence of the eagerness to learn languages that it has been found necessary to check the taking up of optional languages, special permission now being necessary, for it was found that a very large proportion were learning four different languages.

Concours général.

Every year the State arranges a competitive examination (*concours général*), at which the higher forms in Government schools *must* and in others *may* take part. The examination in this case is entirely in writing, and lasts for the Athénées four days and for the Écoles Moyennes two days. A special examination is arranged in languages, which, however, is optional.

Progress of language teaching.

From the last published Government report it appears that good progress is being made with languages, but that in boys' schools French is less satisfactorily studied in the Flemish districts than Flemish in Walloon parts, so that in the former case the French lessons have often to be given in Flemish, while in the latter, in the third year, the master is able to use Flemish entirely. This throws an interesting side-light on the progress of "le mouvement Flamand," and its strength is confirmed by the fact that out of forty-eight schools in Walloon districts thirty-six have chosen Flemish rather than German as the second obligatory language, a decision which rests with the local authority.

The same report further notes that in girls' schools the results in French teaching are "very remarkable." The compositions especially are marked by "wealth of ideas, facility of expression, and correctness of style." The superiority of the girls over the boys is explained by the fact that they "read more and devote more attention to grammar," the last a somewhat unexpected fact. And, again, it is noted that better results in Flemish are obtained in Walloon districts, allowing for the shorter time spent on it than in Flemish parts.

English lesson in secondary school.

It now only remains for me to describe the lessons I heard in Écoles Moyennes, and I will take first the well-known State School of Mlle. Gatti de Gamond in Brussels, and an English lesson to children (boys and girls) in the "Classe Maternelle," little children of seven and eight. The first words were in English: "Now, children, sit up and listen to me. Then questions were



asked about names and qualities of everything in the room : "Show me the blackboard," and the child came out of its place and showed it. "What is this called?" "That is called chalk." "What can you do with the chalk?" "I can write with the chalk." "Write the name of the day and month and year." And it was done. Then the children knew the parts of the body, and of their clothes; colours, forms, numbers; a whole sentence was always required in an answer; and the questions were constantly *reversed* so as to supply words for the answer, thus : "What colour are Marie's stockings?" "Marie's stockings are red." "Show me a little girl who has white stockings." "Susette has white stockings;" and so forth. The children were kept constantly on the alert, pointing out different objects, going through different actions, opening and shutting eyes, stretching out hands, standing up, sitting down, taking up different objects, moving things from place to place, opening and shutting doors, &c.; every order being given in English, and every question asked and answered in English. There was no translation even in thought. If in answer to "Stretch out your hand" the child instantly does so, there is no translation in its mind; but if you ask, "What is the French for hand?" at once translation comes into play. The children in the "Classe Maternelle" have half an hour a day of this conversational teaching, and also learn to sing and recite in English; so that when they are moved to a higher class at the end of a year they have a large vocabulary, and unconsciously know a good deal of grammar, simple tenses of verbs, and *use* of genders and persons, so that they only require to systematise what they have learnt; and are able to read an easy book without difficulty.

I also heard a German lesson to girls of about fourteen, who had only learnt six months. They were reading a simple poem : German Lesson. "Der Wanderbursch." The teacher read it to them first, verse by verse; and then thoroughly explained it, not by direct but by indirect methods. "What was the boy called?" "What was he doing?" "What had he in his hand?" "Why did he wander about?" "What was his state of mind?" and so on. Any special points of grammar were dealt with as they arose out of the passage. Now and then a tense would be conjugated, or a noun declined, and *always* when a verb was mentioned its root tenses were given, and it was classified as strong or weak. German was entirely used, and explanations were always by paraphrase or in a synonym. The girls could write the German character, and had acquired it in a fortnight.

A lesson to older girls, who had learnt nearly three years, was given on much the same principle, only the questions had reference not only to the form but to the matter of the passage read. Second German Lesson. It happened to be from a history book, dealing with the ancient Germanic immigration. Questions on mythology and on Roman history rose naturally out of the passage, and elements of comparative grammar were touched on, as in vowel changes. The lesson was an excellent one from the historical as well as the linguistic point of view; and the girls did not seem hampered in



their answers by the fact that they were using a foreign language only they spoke rather slowly; the teacher, on the contrary speaking very rapidly.

English  
Lesson.

One more lesson I heard in English to girls about seventeen who were taking the Cours Supérieur. This was not on a book, but purely conversational, to let me see their power. They were asked the last book they had read, which had been "Little Women." Different girls gave an account of episodes, and discussed their favourite characters, and the reasons for their preference. I was allowed to ask questions, and enquired if they had read some English poetry. One said she had read Longfellow and on my objecting that he was not English, she at once smilingly said "I know he was American, but he wrote in English." They had read "David Copperfield," "Little Lord Fauntleroy," and other books; but there is a difficulty in obtaining suitable books which make no reference to religious questions. I asked about their holidays, and home work, and holiday tasks, and intention as to a future career, and found they could understand if I spoke fairly slowly and clearly, and could always answer well. Some were going on to the Normal Section, and one or two intended studying at the University, one desiring to become a doctor.

In all the lessons I heard, the main fact that stood out was that the teacher always gave her lesson in the language she was teaching, and that whether the girls knew little or much, whatever they did know was available for use.

École  
Profession-  
nelle.

I visited an École Professionnelle in the rue Terre Neuve where I heard a lesson in German to beginners, but did not observe any new points. The system followed was approximately the same, but on a somewhat lower level. The pupils, I gathered had been educated in Primary Schools, which of course they leave comparatively young. I much regretted want of time to visit other Écoles Professionnelles where foreign languages were taught with special reference to commercial life.

Communal  
Secondary  
School.

The last school I visited was the École Communale of Mille Dagsbeek, which bears a very high reputation, and, from all I could see, thoroughly deserves it.

English in  
Kindergarten

Here I heard an English lesson in the Kindergarten, to children of course all under seven. They knew the names of objects in the room, and could point out different animals in pictures, and understood quite simple little questions, such as "Where do you live?" "How old are you?" They sang an English song charmingly, and one tiny mite, who could not even speak plainly in French, said a little verse in English, and they played at "Cat and mouse," using English words in their play.

English and  
German  
Lessons.

I also heard an English and a German lesson to children about nine and ten, who had learnt a year; they could understand a simple story and answer questions upon it, and were extremely eager to answer. The English class recited, with a very good accent, "I once had a sweet little doll, dears." A verse was said singly, first by one and then by another; and then sometimes all would join and say a verse simultaneously. My visit was unhappily on a day when the higher classes were

not having language lessons—indeed, Mlle. Dagsbeek most kindly arranged the lessons I heard for my special benefit.

At Antwerp I visited a large and important *École Moyenne* École Moyenne Boys at Antwerp English Lesson. for boys, and heard three lessons. One was in English to the youngest class (little fellows of seven); they used more books, and their lesson was not so entirely conversational as that given to girls of the same age at Mlle. Gatti's. Still, they pronounced English well, though it appeared to me that here, as in England, girls take more kindly to foreign languages than boys do.

But I heard a very good lesson to Flemish boys in French, French Lesson. who had learnt three years; they were working steadily at grammar, the lesson I heard being on the use of the subjunctive. In their books a blank was left for the verb, which the boys had to supply, and to give the reason in French why the subjunctive was required.

I heard also a most excellent and animated lesson to the first Second French Lesson. class in French, of the type of a "criticism lesson" in a training college. One boy had been told to prepare a lesson on the evils of "Alcoholism," treated from the moral, intellectual, physical, and social standpoints. Taking his place on the teacher's platform, and with only the most meagre notes, he gave a very clear, sensible, and well-arranged little address. Each boy meanwhile had a note-book in which to note any mistake, and when the address was finished each one read out his accusation, and great amusement was caused by a too eager reformer having sometimes discovered a mistake where none existed. Afterwards the master criticised in a very kindly spirit, chiefly pointing out omissions. Such a criticism lesson is surely an excellent corrective against the self-consciousness of youth, and helps to make a foreign language a really obedient instrument.

In studying the "direct" method of teaching languages it Results of "Direct" Method. occurred to me that it would be useful to know how it worked in after life, and what were the examination results it produced.

With regard to the latter, I am able to quote the authority of a high educational functionary, who speaks with the fullest knowledge. He says:—

"With regard to the teaching of French to Flemish children, the direct method has always been used; and the Flemings, as a rule, speak French as easily and as correctly as the Walloons. The best Belgian writers in French, as Rodenbach, Verhaeren, Van Eckhout, Maeterlink, are pure Flemings who learnt French by the 'direct' method. At the *Concours Général*, in the examinations in English, German, and Flemish in Walloon districts, the teachers who employ the 'direct' method get more numerous and more brilliant successes than the others." He adds: "It must not, however, be supposed that the direct method is the enemy of grammar; quite the contrary; only the rules are learnt as far as possible in the language itself; the teachers and pupils speak constantly instead of only translating; and thus by applying the rules much more frequently they learn their work more thoroughly. In a word, the direct method consists in utilising all available time in the study of the foreign language, instead of spending

a large portion on the mother tongue ; it makes use of translation when it is necessary, but it does not consider translation as the end to be attained, rather as one of the means which the teacher will use to assure himself that the pupils have understood his lesson."

With regard to the effect of the direct method in after life is not easy as yet to get very positive information. But it is certainly a fact that the older generation, the Directors and Inspectors, and people in middle life, have a good knowledge of English literature and can read it well, but often are quite unable to speak ; while the young teachers, many of whom have learnt on the newer system, speak quite fluently. Nor are there indications wanting of an increased interest in foreign language among Belgian boys and girls at school, as is shown by their desire to take up the optional languages ; but also those who have left school desire in many instances to carry on their study. There exists, for instance, in Brussels a "Polyglot Club" for the study of foreign languages and literatures.

This club, founded in March, 1896, already numbers over 500 members. Its object is to promote the study of living languages. To this end it arranges language-lessons in several sections according to the language taught ; a reading-room and library ; an enquiry office ; the conduct of examinations and issue of certificates.

The languages at present taught, and the number of students entered for each, is as follows :—

English, 80 ; German, 60 ; Russian, 40 ; Dutch, 30 ; French, 40 ; Portuguese, 7 ; Roumanian, 5 ; Italian, 20 ; Spanish, 25. Most of these sections divide their members into two, some into three, classes. Each section elects its own committee, and draws up its own programme ; but the general principle is that of mutual help, foreigners attending and giving their assistance to the Belgians who are studying their language ; and a meeting of a social kind takes place at least once a week. On the first anniversary of the opening of the club an entertainment was arranged, comprising the acting of short English and French drawing-room sketches, and German, Italian, and Flemish recitations.

The enquiry office undertakes to give information on new developments of linguistic study, and gives help in the translation of difficult passages.

The examining body is appointed by the members of the club, and comprises public and private teachers of proved capacity, and others who, by reason of their profession, nationality, or public services, may be assumed to have the requisite knowledge. The examinations are oral and written ; but no one may take the written examination who has not passed the *vivâ voce*, which lasts half an hour and includes conversation, and translation at sight. The questions are put in the language which is the subject of examination, and is held in public.

The existence and flourishing condition of such a club seems an evidence of widespread interest in the study of languages ;



and another interesting bit of evidence is supplied by the principal library in Brussels. One of the firm was good enough to furnish me with information as to the sale of foreign books in Brussels. He says: "The sale of foreign books has increased considerably during the last few years, and that thanks largely to the number of courses of instruction which have been established in most places. I speak especially as regards Brussels, and I judge by this fact; a few years ago we were the sole, or almost the sole, house supplying foreign books; at the present time we receive a large number of orders from other firms. This applies especially to English and German works; Italian and Spanish are less studied. The Russian language is making progress." He concludes by saying that the languages seem usually to be studied from the utilitarian point of view, current literature being read chiefly by the cultivated classes.

I cannot end this very imperfect notice without expressing my most cordial thanks to the Belgian educational authorities who so courteously and readily facilitated my enquiries, as well as to the teachers who gave me such a kindly welcome. Especially I desire to record my deep obligations to M. Kleyntjens, Inspector of Écoles Moyennes, and to M. Devos, Inspector of Écoles Primaires, who accompanied me in my visits to the schools, and were always ready to give any information. Most of all I was indebted to M. Van Camp, Directeur Général, whose lamented death occurred during my stay in Belgium, and from whom I received a letter full of kind proposals for my help, written only a few hours before the stroke fell on him from which he never recovered.

From all I saw of the enthusiasm of organisers and teachers, and of the system which together they have brought to such high perfection, I am sure we have much to learn from them. Had space permitted I should especially have desired to call attention to the frequent conferences between teachers in a school, and the larger meetings of the staff of several schools under the presidency of the Inspector, where everyone has an equal right to contribute to the discussion, and which afford an opportunity for an able assistant teacher to show what is in him. Attendance at these meetings is compulsory, and they are specially designed to make teachers in a school work harmoniously with a full knowledge of what their colleagues are doing, while they afford an admirable opportunity for the practical teachers and administrators to come together.

Readiness  
to give  
Informatio

Conference

## II.—Holland.

Reasons for  
Dutch study-  
ing foreign  
languages.

There are several reasons why modern languages should carefully studied in Holland. Not only is it a small country wedged in between France and Germany, but its language unlike French and German, is not spoken in any other country except in the Flemish districts of Belgium; nor is its Literature sufficiently extensive to induce foreigners to learn the language being indeed inadequate to the needs of the Dutch themselves so that both for purposes of international intercourse and satisfy the intellectual appetite of this singularly thoughtful and cultivated nation, an intelligent study of foreign languages is absolute necessity.

Again, the Dutch travel a great deal, and are possessed extensive colonies, which exercise a far greater influence on the national character and habits than is generally supposed English people. Their East Indian possessions fill quite important a part in the national life, as an outlet for the educated young men, as India does for us; their ideas and interests extend far beyond the narrow limits of their own country, and they unite in a very remarkable degree with cosmopolitan sympathies with an intense patriotism.

The well-to-do classes are extraordinarily good linguists, hard second to the Russians in this respect, especially as the knowledge generally extends to the Literature as well as to the language of other countries. The custom of giving children foreign nurses and governesses is very general, and many children learn English before they learn their own language. It is a common thing for families to speak French or English habitually at meals; and friends talk together quite naturally a foreign language, without any sense of strain or affectation.

The traditions of the time when a French King ruled are still fairly fresh, and in the late King's time French was habitually spoken at Court; while in a small society the diplomatic circle occupies a large place, and French is, of course, still the common language among diplomatists in social intercourse. Again, in the large commercial towns there are English colonies; and there much social intercourse and frequent intermarriage between England and Holland.

German is usually studied by educated people, but I should say is regarded rather more as a luxury than a necessity, like French and English.

Admitting then, the need, and admiring the facility of the Dutch for the study of foreign languages, let us inquire how the one is supplied and the other cultivated.

Social distinctions and  
varying  
habits.

Here I think we must recognise the existence of very marked social distinctions, not obtruded, on the one hand, nor resented on the other, but *present* in an unmistakable manner; and different social classes different habits prevail. The girls of the

highest social position are usually educated at home by resident governesses, and both in the nursery and the schoolroom, as well as in family intercourse, they are accustomed from babyhood to hear and speak foreign languages.

Boys go to the Gymnasias, where classical teaching is given, but where certainly more attention is given to modern languages than in the generality of our Grammar Schools. Nevertheless, men in Holland are not such good linguists as ladies, though better than Englishmen; this is due, I think, partly to greater freedom from self-consciousness, and partly to a more rational system of conversational teaching.

Girls and boys of the middle class almost invariably attend the Hoogere Burger Schoolen, where languages are well taught; and boys who are intended for commercial life generally pass on to a Handel School (Commercial School) where special attention is given to modern languages and commercial history and geography.

Children of the working-class attend the Primary Schools, which are of two grades. In many of those of the lower grade, in the towns, French is taught; but children who can remain at school till about fourteen pass on when about twelve to a higher grade school, where English and German are also taught, and where generally a higher standard is maintained.

Going from Belgium to Holland, one is at once struck by the difference in their educational system. In Belgium it is highly centralised; in Holland it is as markedly decentralised, far more so than in England; for, within certain very wide limits, every town organises its own schools, and publishes its own detailed Reports of work done. There is no official scheme of study, nor special method of teaching prescribed by the Government, the teachers have very largely a free hand, though the schools are, of course, subject to Government inspection. The books to be used are proposed by the teachers to the Inspector, and he authorises them, if he thinks fit, after consultation with the municipal authority.

This great diversity in different towns and provinces makes it very difficult for a foreigner to gain any distinct idea of the state of education in the country generally. I can only give a few broad facts, and will then describe the lessons I heard given.

*Training of Teachers.*—In Holland no one can teach without a diploma, under very strict penalties, but this diploma, both in the case of primary and secondary teachers, can be obtained by examination alone; indeed, for secondary teachers no training college exists. A University degree confers the right to teach in certain objects; e.g., a doctor's degree in Law entitles the holder to teach Political Economy; a Doctor of Literature may teach Dutch language and Literature, History and Geography; a Doctor of Science, Philosophy, Mathematics, Mechanics, Physics, Chemistry, and Geometry. Military men and engineers who have passed through the Military Academy at Breda and the Polytechnic at Delft have the right to teach certain Science subjects.



Training  
Colleges.

For Primary Teachers there are twenty-one Kweek Scholen (Training Colleges), six belonging to the State, three established by the towns of Groningen, Leiden, and Amsterdam, and twelve founded by religious bodies or private individuals; both the latter classes are subsidised by the State. The students enter these colleges at the age of fourteen, and the course of training lasts four years, comprising theory, and practical teaching in the Practising School.

There are also ninety-seven Day Training Colleges (Normal Lessen) belonging to the State, and thirty-four of different denominations, which are assisted by the State. Only some of these have a Practising School attached.

French at least is taught in all these Colleges, usually English also; but as the subjects, methods, and time tables vary in different cases, I found it impossible to get statistics of value on these points.

Examina-  
tion.  
Primary  
Teachers.

*Examinations.*—There is an entrance examination into the Training Colleges, an annual one during the four years' course, and a leaving examination which may not be passed before the age of eighteen; the latter is also open to candidates who have been prepared by private tuition. It comprises, in languages, translations from and into Dutch, Grammar, pronunciation, and *facility in speaking*, a large part of the examination being *vivi voce*.

Secondary  
Teachers.

In the case of Secondary Teachers, there are two examinations, called respectively "A" and "B." The "A" examination includes translation from and into Dutch, composition, the origin and history of the language, with *e.g.* in English, a knowledge of Anglo-Saxon and Sanscrit roots, various systems of phonetics, and facility in speaking. For the "B" Examination, a knowledge of Literature and its history is required, and literary style must be understood. For the written composition in the "A" Examination, such subjects as the following are set in the French section: "An account of one of the official journeys of the Queens of Holland"; "A visit to the country, or the seaside"; "A good book is a good friend." For "B," "Le Roman de Renart," "le Roman de la Rose," "Is it correct to describe 'The Princess of Cleves' as the first modern novel"?; "The influence of J. J. Rousseau on Nineteenth Century Literature"; "Sainte Beuve's Criticism on J. M. de Heredia, or Paul Verlaine; the material and form of their poetry."

So searching are these examinations, that two or three years' preparation is usually required for "A"; and an additional two years for "B"; and I am told it is hardly possible to reach the required standard in speaking, without residence abroad. During the last three or four years, very few candidates have succeeded in passing the "B" examination in English or German, but more passed in French.

Travelling  
Scholarships.

The Examining Body, in a recent Report, urge the Government to provide travelling scholarships to enable teachers to attend summer courses in foreign countries; and they draw special attention to the fact that of the foreigners who

attended the 1895 Course at Paris, arranged by the *Alliance Française*, fifty per cent. of those who obtained the highest diploma were Dutch. They also express great pleasure at the zeal with which phonetics had been studied.

One great difference between Primary and Secondary Teachers is that the first are "Form Teachers," teaching all subjects to their own form; while the second are specialists, and teach only one subject; the Secondary Teacher, therefore, is only required to pass an examination in that one subject; but the standard is very high, and such examinations are seldom passed before the age of nineteen or twenty.

The examinations are held once a year; and the examining body in the case of Primary Teachers is composed of School Inspectors and selected teachers from Primary Schools; in the case of Secondary Teachers, the examiners are appointed by the Minister of the Interior (who in Holland fills the place of Minister of Education) and usually include University Professors, and Teachers and Directors of Secondary Schools; there is a separate Examining Board for each subject. Examining body.

*Primary Schools.*—As has been already stated, the diversity of custom in different places makes it difficult to arrive at general facts. In the country schools, and those of small towns, French is not always taught, and in any case only the elements are attempted. But taking one of the chief schools in the Hague as typical of a good town school, I find the children do not begin French till their fourth school year, when they would be about ten, and then they devote from three to four hours weekly to it during the three last years of school life. Primary schools.

*Secondary Schools.*—By comparison of several time tables I have endeavoured to find out one or two points of general custom amidst much diversity. Secondary schools.

(1) In the Hoogere Burger Schoolen the time given to languages seems to be much the same for boys and girls. Language teaching.

(2) French is the first language taught, and has most time devoted to it; then comes German, and, lastly, English, which surprised me, as certainly in daily life English seems most used.

(3) The time devoted to each language per week seems usually from three to four hours during the three first years, and from two to three hours in the two final years.

(4) In all the programmes of study I have seen, the language is studied during the first three years, and only in the fourth year is the literature, and history of literature taken.

(5) While, especially in the case of French, speaking is insisted on, translation (from and into Dutch) plays a much larger part in all the programmes of study than in Belgium; but so far as I could judge from the lessons I heard, practice is being largely modified in this respect, and is ahead of theory.

(6) In nearly every case the first place in the study of English is given to *pronunciation*.

The usual course of teaching seems to last five years, but in some cases only three. The boys who have had a five years' course in a Hoogere Burger School can, if they wish, take the Abituriente examination

Abiturienten Examination. In one of the few published Instructions I found the following addressed to the examiners for the examination :—

“They must remember the chief aim of these schools—to give young men such a knowledge of various subjects as is expected now-a-days from every well-educated man. The candidates must show by the thoroughness of their work that they have obtained the necessary foundation for a special preparation for any future career or position ; and that an all-round mental development fits them to benefit by the experience of practical life. Therefore, in the examination more regard will be paid to intelligence than to memory. The examiners will rather try to find out what the candidates know than to spy out gaps in their knowledge in the less important subjects.”

“In French, English, and German, candidates must show by an essay on a set subject that they can write these languages without gross mistakes. In the *viva voce* examination, candidates will be expected to show that they can express themselves fairly well in these languages, and can apply the rules they have learnt.

Primary school at the Hague. French lessons.

I will now describe the visits I paid to Primary Schools :

(1) Mixed school for boys and girls at the Hague.

Here I heard a French lesson to children who had learnt a year. They knew words and sentences about common things and repeated them in a good accent, but they seemed to be learning by rote, rather than drawn out from the children's own knowledge. The teaching was not entirely on the ‘direct’ method nor was it so animated as in Belgium.

I heard a second lesson to children, who had learnt a year and a-half, and had made great progress. A picture of a fish was put up, and they had an object lesson on it in French ; they could produce longer sentences, and replies of one word were not accepted. In speaking of fresh and salt water, the teacher actually filled a glass with water, put salt into it, and let one or two of the children taste it. Both lessons were carefully given but it seemed to me that memory played too large a part, the children seemed to be *remembering* that the French words were equivalents for certain Dutch words, rather than freely expressing their meaning directly in French.

Another primary school at the Hague.

(2) At another mixed Primary School, I heard a lesson on the Gouin Series Method, now too well known in England to need description. While it has much in common with the ‘direct’ method, it is not identical with it. These children had learnt two years, and had made considerable progress, and the lesson was brightly given, but seemed a little mechanical in comparison with those I heard in Belgium ; where sequence of ideas is so much insisted on, it seems to me there may be a danger of children only knowing words and phrases in the customary connection, and not applying them to new cases.

Higher grade primary school at the Hague.

(3) My next visit was to a Higher Grade Primary School, to which girls from the former school pass on, if they desire to continue school work for a couple of years and yet do not aspire to the Hoogere Burger School.



Here I heard a quite admirable lesson in English, to girls who had only learnt about eight months, and had made astonishing progress. They were reading a little story of a visit to London, full of every-day expressions. The teacher spoke English entirely, asking questions rising out of the story, and giving illustrations and additional information; such as facts about London; what river it was on; noting how many capitals were on rivers, and asking why; then the children were asked what a traveller would see on reaching London; crossing one of the bridges was described, and buildings were named, such as St. Paul's, Westminster Abbey, the Houses of Parliament, the Tower, and the Crystal Palace, which they were carefully reminded was near London.

English lesson.

Again, when the story suggested it, English customs were described, hours of meals, &c.; the lesson was thoroughly interesting and would help to familiarise the class with English life as well as the English language.

(4) I visited also an excellent Primary School in Leiden, and heard two lessons in French to young classes, children from about eight to ten; the "direct" method was employed; but books seem to be used at an earlier stage in Holland than in Belgium. The book I heard used in this case was well adapted for its purpose, describing the streets in the early morning, and the tradesmen bringing their wares, the milkman, the butcher, &c.; after a complete little story, one on much the same lines was given with blanks for the principal nouns, and then another with blanks for the verbs, which the children supplied, always giving the root-tenses. The teacher used a good deal of gesture and kept the children's attention completely rivetted. French was used throughout both by teacher and children.

Primary school at Leiden.

*Hoogere Burger Scholen:*

(1) I visited the Hoogere Burger School for Girls at the Hague, and heard two lessons, one in French and one in English.

Hoogere Burger School at Hague.

The French one calls for no special remark; the girls, who had learnt for three years, were simply reading a play in very good accent; but when I was there, no special teaching on it was given.

The English lesson to girls who had learnt a year and a-half was decidedly interesting. They were reading *Julius Caesar*, and the teacher gave an excellent useful lesson, explaining verbal and grammatical difficulties, and the girls were encouraged to ask questions; the lesson treated the subject from the linguistic and not from the literary point of view; but, of course, that may have been done on other occasions.

English lesson.

Everywhere in Holland I noticed that progress in English was quicker than in French. Boys and girls who had learnt only eighteen months knew as much as they had learnt in French in double the time, and their accent was amazingly good. No doubt the close relationship between English and Dutch quite explains the fact.

Rapid progress in English.

(2) One of the schools which impressed me most was the Hoogere Burger School for Boys at Utrecht. It is a fine spacious

Hoogere Burger School at Utrecht.

building, light and airy, and splendidly equipped with chemical and physical laboratories and apparatus.

French  
lesson.

I heard a French lesson to boys of the third class (about fifteen years of age). It was like those previously described in Belgium, asking for synonyms constantly, and teaching the grammar in connection with the book the boys were reading.

English  
lesson.

Then I heard a first-rate lesson in English to boys who had learnt a year and a-half. They read a very difficult passage from one of Wallace's books, in an excellent accent, answering questions on both substance and form of the passage with accuracy and intelligence. Then they were asked to give an account of a journey to Amsterdam, which was done with great animation, great amusement being caused by one boy saying he took a "first-class ticket;" another boy described giving "a little tip" to the cabman; then the boys translated orally with astonishing ease and accuracy a passage of considerable difficulty.

Dutch lesson.

I looked in at a Dutch lesson to the highest class, who would soon be proceeding to the University; they were reading a standard novel, and were studying style and etymology of words. Girls were admitted to this school, but out of two hundred pupils only sixteen were girls, one or two of whom were intending to study at the University.

Private  
school at  
Scheven-  
ingen.

(5) I was allowed to visit the private school for girls at Scheveningen of Miss Snoeck, which has a very high reputation; I was present at a French lesson to girls about sixteen, but found nothing special in the method; the girls were only reading, and writing out and learning by heart new words.

Handel  
School at  
Amsterdam.

(6) The last school I will mention is the *Handel School* (Commercial School) at Amsterdam, in a beautiful old house with splendid ceilings and panels; this school is also a Technical School, and seems admirably organised and equipped; all the teaching I heard struck me as especially brisk, intelligent, and up-to-date.

German  
lesson.

The first lesson I heard was in German, to boys about twelve who had only learnt eight months. They had read an easy story and were giving an account of it in their own words, answering questions, and following the master closely, though he spoke extremely quickly.

English  
lesson.

Next I heard an English lesson to boys of thirteen or fourteen, who also had learnt less than a year. The teacher had a London degree and had hardly any accent at all. Two boys chosen from the class came up on the platform and recited and acted a little dialogue in very idiomatic conversational English; I asked the boys one or two questions, and several were able to answer quite correctly.

Advanced  
English  
lesson.

Then I heard an English lesson to lads about seventeen who had learnt five years; one had prepared and repeated from notes a short essay on the character of the country round Terra del Fuego; another boy described a new line of railway—the difficulties of construction, the crops grown in the neighbourhood, and the nearest markets. The language teaching seemed well

adapted to give useful teaching in commercial history and geography as well.

I next heard a German lesson to little boys about eight and nine who had learnt eight months; they could already tell a short anecdote, or give an account of their holidays, or an excursion, the master only helping them out by questions in German, supplying a word which he saw they did not know. They were allowed also to correct each other; and were sometimes asked to decline a noun, or conjugate the tense of a verb. In this case the master was a German, and he ended the lesson by letting the boys sing a German song, which they did most charmingly, in two parts, with admirable precision and well-marked light and shade.

The last lesson I heard was in German commercial correspondence to young men of eighteen or nineteen. They were asked to answer letters on commercial subjects, *viva voce*, introducing all sorts of technical business phrases, and dealing with currency questions, export and import duties, rise and fall of prices, &c.; the speaking both of master and pupils was very rapid, and the answers were given without any hesitation at all.

I was told that a party from this school had visited London last year and had gone up to Yorkshire to visit some of the large manufacturing towns, and mills, as an important part of commercial education.

In Holland, as in Belgium, I found the greatest readiness to show everything likely to be useful for my purpose, and the teachers were all most kind in their welcome. Nor did I observe the slightest self-consciousness on the part of the children; my visit seemed in no way to disturb them, though I was told the visit of a lady to boys' schools was very unusual.

I have also to express cordial thanks to the Dutch educational authorities, who requested Mynheer van Aken, Inspector of Secondary Schools, and Mynheer Snoeck, Inspector of Primary Schools, to give me any assistance in their power. The latter was unfortunately away from home during a part of my stay, but gave me very helpful information, and the former accompanied me in many of my visits, and to him and his daughters I am indebted for valuable help, as also to Mynheer van Marken, who visited several schools with me.

JESSIE DOUGLAS MONTGOMERY.

January, 1898.

[Since this Report was in print I have had the advantage of reading a valuable paper on somewhat similar lines, presented in 1893 by Professor Herbert Strong to the Scotch Education Department.—J. D. M.]



## SCHOOL HYGIENE IN BRUSSELS.

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### SCHOOL HYGIENE IN BRUSSELS.

Attention to  
School  
Hygiene.     The subject of School Hygiene seems to have received a full and en-  
lightened consideration from the municipal authorities in Brussels; and the sanitary regulations prescribed in the Primary Schools of the Commune seem to me worthy of attention, as showing in a marked degree a characteristic which runs through all official educational documents in Belgium, viz., a close and minute attention to detail, combined with a constant reference to scientific theories and general principles.

I wish especially to call attention to a remarkable Report presented to the Communal Council in 1896, by the *College* (i.e., the special education authority appointed by the Council, and presided over by the Echevin, whose position answers, perhaps, approximately, to that of our Vice-President of the Council, but whose powers only, of course, apply to Brussels). I propose presently to summarise the most important passages of this Report; and then, in Appendices, to give the Brussels regulations with regard to school buildings; and, what is more novel and interesting, details of the medical examination of the children in the Primary Schools, and other sanitary provisions.

Collectivist  
Policy.     In visiting these Primary Schools, it is manifest at once that to a large extent a collectivist policy has been adopted by the Commune, especially with regard to School Hygiene. Medical and dental attendance are provided gratis; and what is known as "preventive medicines," i.e., cod-liver oil and a pulverised preparation of iron, are supplied to necessitous children. It must be remembered in this connection, that since hospitals are managed by the Commune, and the

remedies ordered by the medical officer are supplied by them, these preventive measures are practically an extension of the out-patient department. But as a result of these measures, the Commune already finds itself confronted by a serious problem. Medicine can do but little for underfed children, living in unhealthy homes. Having begun a paternal policy, is it to be carried to its logical conclusion, and is the Commune to provide necessitous children with food, clothing, and beds? If so, why only children attending the Communal Schools, since others equally need help? On the other hand, if the Commune accepts such a burden, what will be the moral and economic results? Will not early and improvident marriages be encouraged, parental responsibility abrogated, and family life broken up? And will not national character deteriorate if a compulsory and mechanical payment of rates relieves parents from the need of personal effort and self-sacrifice for the good of the family?

Again, will not an almost crushing burden be laid on the hard-working and respectable among the industrial population, while a premium is offered to the lazy and good-for-nothing? These are the questions discussed in the Report, which I desire to summarise; and as we note the comparatively small numbers with which Brussels has to deal, we are reminded how many Socialist schemes in all ages pre-suppose small States or small cities.

The Report is called "Enquiry into the Clothing, Food, and Housing of the Scholars attending the Communal Schools, presented by the College to the Communal Council," and it bears date January 1894, but was not considered by the Council until 1896.

Report on Food, Clothing, and Housing of Children.

It opens with a historical review of the situation, and records that in 1888 a certain Association, called the "Progress Club," was authorised by the College to provide doles of soup at mid-day to necessitous children in the Primary Schools of the Commune. At first the distribution took place in the premises of an Industrial Co-operative Society, but these becoming overcrowded, it was transferred to the schools themselves, the Co-operative Society still undertaking the preparation of the soup, the City providing tables and allowing the Fire Brigade to convey the soup, while the "Progress Club" provided the crockery needed, and the teaching staff of the schools undertook the washing up.

Historical Review.

At first, the public warmly supported the enterprise, and money flowed in, the result of subscriptions, collections, and entertainments, sprang up for other objects, and the stream of public generosity changed its course; in its need the "Progress Club" decided to appeal to the civic authorities for help, and as a result, in December, 1891, a member of the Communal Council proposed a subsidy of 5,000 francs to the "Progress Club." The "College" and the Committee of Public Instruction opposed this vote, on the ground that it would lead to a continually increasing outlay, involving an immense expenditure by the town, and, further, that it raised the whole question whether or no the Commune should accept the responsibility of feeding necessitous children, or whether it should subsidise the efforts of private philanthropy. In spite of these representations the Council voted the sum of 5,000 francs, but only for one year.

What the College had foreseen actually occurred. As soon as public assistance was given, private contributions fell off, so that in 1893 the former vote was insufficient, and a Councillor proposed that the subsidy of 5,000 francs should be doubled, and that a supplementary

mission  
enquiry  
intended.

grant of 5,000 francs for the supply of clothing should be voted. The College repeated the former arguments against the proposal, and after discussion, the following Resolution was unanimously passed:—  
“The Council decides that a Commission of Enquiry appointed by itself from among its own members should be constituted to examine into the condition of the children attending the Communal Schools with regard to food, housing, and clothing. It shall also enquire into the financial outlay required for the supply of soup and clothing to the schools.”

e of  
enquiry.

This Resolution was further considered by the Committees of the Council dealing with Public Assistance, Instruction, and Finance, who, in conjunction with the supporters of the Resolution, recommended the following procedure:—

(a) A Form should be sent to Head Teachers, who, with the assistance of their Staff, should furnish information as to the clothing, the habitual food, the cleanliness, and school attendance of their children.

(b) The public officers of health should be entrusted with an enquiry into the state of the children's health, and the sufficiency or insufficiency of their habitual food.

(c) The police should undertake the enquiry into the housing of the children.

With regard to *a*, the following information should be given:—How many children wear *sabots*, shoes, slippers, or are otherwise shod? How many are well and how many badly shod? How many have habitually clean and tidy clothing; and how many are habitually dirty and untidy in their dress? How many receive clothing from some charitable agency? How many *ought* to receive such assistance considering their usual condition?

With regard to *cleanliness*:—How many habitually come dirty to school (face, hair, neck, hands)? How many take a bath, at least, ten times a year? and a foot-bath, at least once a week? How many wash all over every week? How many are habitually without a pocket-handkerchief? How many children share in the distribution of soup? How many appear to be insufficiently nourished, judging by their appearance?

With regard to *(b)*, the following classification was to be adopted by the doctors:—How many children are habitually in good, moderate, or bad health?

2. How many have sufficient, how many insufficient food?

With regard to *(c)*, the questions to be answered were:—How many children sleep in a bed, or have no bed? How many sleep in the same room? How many in the same bed with their parents? In how many cases do brothers and sisters sleep together? How many live and sleep in one room? How many in a basement, or cellar?

The case of 14,447 children was considered, with the following result:—

2,442 or 16·89 per cent. were badly shod.

3,620 or 25·4 per cent. were badly clothed.

3,663 or 25·55 per cent. were badly fed.

The outlay necessary to remedy this state of things was estimated at 389,000 francs annually.

Commission  
Report.

The results of the enquiry were communicated to the various Committees of the Council in November, 1894; when the Echevin (the



President of the Education Committee) pointed out not only that the amount demanded was beyond the resources of the City to provide, but that even such a sum would be insufficient for all needs. Experience unfortunately, shows that every distribution of relief produces an increased crowd of applicants, and he urged the grave danger of rendering the parents indifferent to the wants of their children, and weakening the bond of family life. The real question at stake, he urged, was: "Should the Commune take the place of the parents in providing food and clothing?"

Another Councillor disputed the accuracy of the figures, and moved that enquiry should be made as to what was done in other towns in Belgium, and in foreign countries. Others desired to fix an arbitrary limit to the expenditure in this direction, and proposed 50,000 fcs. as the sum; while another desired the present system of relief to be extended, and continued during the whole year, not only in winter.

The Council met two days later, and having considered the arguments put forward by the Committee, decided by a vote of 18 against 5 to adjourn the question, in order to allow time for further enquiries, especially in foreign countries.

The full report of the Committee, including the results of the enquiry in Brussels and elsewhere, was only presented in 1896. I do not propose to enter into the statistics from other countries, of which it is difficult exactly to estimate the value, as we are not told the sources from which they are derived, nor can we appreciate them justly without some knowledge of the conditions which obtain in the various towns and countries named. But the conclusions as to Brussels are of considerable interest, and in all cases we know exactly the persons who undertake the enquiry.

The Committee of Enquiry first deals with general considerations as to the question of *principle*; then gives an account of what is being done at the present time, and sums up the results as bearing on the right action to take in the future; while the figures obtained in the various enquiries are given in Appendices.

Summary  
Report.

With regard to general principle, the Committee express sympathy and admiration for the philanthropic agencies which have provided soup for the children; they are undoubtedly deserving of personal assistance, and to a certain extent of the assistance of the town; but they point out the gulf which exists between this view and the desire to transform a work of private benevolence into one of public responsibility. A private individual, the Committee contend, follows the prompting of his heart, and helps according to his power, without asking himself what will be the moral consequences of his action. But the case of a public body is quite different. When a proposal is made to create a far-reaching organisation for the help of the poor it is necessary to ask whether the remedy may not be worse than the disease, whether the moral consequences would not be disastrous, and whether, after enormous expenditure, the results attained might not be exactly contrary to what was desired. We can no longer, continue the Committee, accept the simple formulæ of the French Revolution as adequate remedies for social evils; we know that the *literal* interpretation of the Gospel precept, "Feed the hungry, clothe the naked," is not a solution of the difficulty. Experience has shown that, except in cases of temporary or accidental necessity, public and systematic relief only tends to moral deterioration; it is but a return in modern guise to the daily doles of religious communities under the *ancien régime*, which only resulted in the encouragement of the sluggard and the misery of whole masses of the people.

General  
principle  
laid down  
by the  
Committee

Causes of  
Poverty.

Depreciates  
indiscrimi-  
nate help.

Approves  
efforts of  
private bene-  
volence.

Sanitary  
measures  
already in  
force.

The Committee then ask: "In the greater number of cases, is the condition of necessitous children the result of unmerited misfortune the part of the parents? In the majority of cases it is due to idleness, thriftlessness, drunkenness, or ignorance. Furthermore, in cases where no blame attaches, then not only the children but the whole family need help; the head of the family needs to be supplied with work, and the various associations of private charity can best deal with such cases."

"But," says the Committee, "it is urged that all children who are who seem to be in want should be helped. Is it not obvious that to do this is the surest way to augment the numbers who require such aid? With every charitable intention, the last bond uniting parents and children is broken, which is often the only influence restraining parents from giving way entirely to vicious habits. To quote a French economist, the free distribution of relief only makes the poor more comfortable in their poverty, instead of helping them to rise out of it."

"It is useless," the authors of the report continue, "to maintain that the obligation in this case is the same as that of providing education which the progressive party in Belgium has always recognised as one of the most pressing duties of the State. Education is a great social interest, a need which individual citizens are not able to supply for their children. But food and clothing are not public, but personal necessities which it is not inherently impossible for parents to provide. Our energies should rather be directed to restore self-respect, and to make parents feel the necessity of working for their children. And in our endeavours to protect the poor from unmerited adversity, we should strive to develop the spirit of forethought, order and economy."

"But in spite of all that has been said," continues the report, "it must not be supposed that nothing ought to be done, and that nothing is done. We gladly recognise the admirable efforts of the benevolent, which provide warm clothing every winter for the children in our schools. In the case of Kindergarten for instance, School Committees, charitable societies, young girls in the higher grade schools, vie with one another in generous effort. In the primary schools, clothing is frequently given; in some schools members of the staff forego certain payments in order to assist this work; and the Communal Committee of Benevolence during the past year have clothed 1,435 children; while, finally, the Communal Council voted a sum of 10,440 fcs. for the purchase of materials to be made up by the needlework classes in the girls' schools, and then distributed among the poorer children."

"We also call attention to the sanitary measures in our schools which have been taken as a model in many other towns, both in Belgium and elsewhere. Sixteen doctors inspect the schools, each being bound to visit a certain number every ten days, and the Service of Public Health keeps control of their visits by means of the readings of the thermometer in every school, which have to be signed by the medical officer at each visit."

"Sickly children are given every day a dose of cod-liver oil, or a preparation of iron powder, which is supplied by the Committee of Public Benevolence. These remedies are administered by members of the teaching staff; every child has a separate glass, which must be washed daily; and once a month the visiting doctor must be present when the medicine is administered."

"A dentist is attached to the schools, who visits all the schools once a month, and attends to the cases which are brought to his notice by the teachers, and those which he himself observes. In 1894-5, 3,676 children were given preventive remedies, and at the end of the year,

3,409, or 92·7 per cent., were reported as benefited ; and 1,292 children were operated on by the dentist. These things cost the town annually from 10,000 to 11,000 fcs."

"With regard to food, the 'Progress Club' has organised the supply of soup and a piece of bread to such children as are recommended by the teachers as needy ; and in this work the town has assisted. The very fact that the resources of this private association are limited is an advantage, keeping its work within due limits. We consider that this organisation should continue its operations with, if necessary, subsidies from the Town."

With regard to the future, the report considers that "the annual expenditure necessary to provide for the estimated needs, as to food and clothing, would amount to about 389,000 fcs., exclusive of working expenses. The vote of 51,000 fcs. to the 'Progress Club,' proposed by one member, might be a sop to public sentiment, but it would be only the bandage which hides the wound but does not heal it.

"The plate of soup supplied to necessitous children does something for them doubtless, but is not sufficient for their support, even with the more substantial stew, which is sometimes given, especially as some parents make it a pretext for giving no meal at home, and the doctors pronounce that every child who does not get meat or eggs four times a week is insufficiently nourished. Some have taken higher ground in advocating the supply of food to the children at school, talking of the preservation and the future of the race. If we take that ground, the simple plate of soup will not suffice, and we must not be contented with half measures, if we admit the principle."

"In our estimate of expenses, we have not included the supply of bedding. Many poor people who are bound by their work to live in the town would have no room for beds even if they were provided."

"Questions of this kind," concludes the report, "require calm consideration, apart from pure sentiment. The College has endeavoured to conduct the enquiry desired by the Council loyally and completely. But it must not be forgotten that the enquiry only included children attending the Communal Schools, and that the needs of children attending other schools, and of those not at school at all, are equally great. The number of children of school age in the last census is estimated at about 27,000, nearly double the number of those attending the Communal Schools. A sum of nearly 800,000 fcs. would be required to extend the distribution of food and clothing to all necessitous children. Need for sobriety of judgment.

Ought the Town to bear this burden ?

We think we have already answered that question.

Can the Town bear this burden ?

An examination of the Budget furnishes a sufficient reply. Assuredly it would be desirable to ameliorate, and if possible, to remove the sufferings of children ; but where can the Town obtain the necessary means ? The financial administration of large towns is becoming ever more and more complex and difficult ; needs increase every day, but the public protest loudly against any new demand. Moreover, is it not better to provide for the more imperious necessities by the help of private benevolence and personal initiative ? For we repeat, that we should avoid encouraging improvidence, vice, and idleness, and allowing a whole crowd of worthless and degraded people, as it were, to crystallise round a nucleus of temporary and deserving unfortunates. As a general rule all help should be *earned* by the able-bodied. Every other form of alms degrades a man, and prolongs his wretchedness, and that of his children. With many, the necessity of working for their children is the last rem- Final conclusion.



nant of personal dignity, the last prompting of conscience with regard to work and sobriety. We must not underestimate these considerations, but must echo the words of M. Paulian: "A misplaced benefit is an injury."

This remarkable document is completed by a large number of Appendices, with tables of statistics; some seem to be well worthy of study, and I add those which appear most important.

Method of  
enquiry.

The enquiry form sent to the Head Teachers of Primary Schools is prefaced by a warning that all investigations should be carried out with tact and delicacy. Children are not to be asked any questions publicly which might humiliate them, or ruffle their dignity and self-respect.

thing

The enquiry as to the clothing of the children in the Primary Schools of Brussels, includes 11,904 children, with the following results:—

#### Number wearing

Sabots? ... ..	2,347
Shoes? ... ..	8,536
Slippers? ... ..	187
Other covering for the feet? ... ..	834
Badly shod? ... ..	1,910
Well shod? ... ..	9,994

#### How many

Are usually cleanly and neat in their dress? ...	10,438
Are usually dirty and untidy in their dress ...	1,466
Receive gifts of clothing? ... ..	2,187
Require such gifts? ... ..	2,783

#### With regard to cleanliness:

#### How many

anliness

Habitually come dirty to school? ... ..	876
Take a bath at least ten times a year? ...	5,577
Take a foot bath once a week? ... ..	9,086
Wash all over once a week? ... ..	8,234
Are habitually without pocket-handkerchief? ...	1,924
Receive a dole of soup? ... ..	3,109
Appear to be insufficiently fed? ... ..	2,120

#### Housing:

Living.

Children who sleep in a bed? ... ..	10,543
Who have no bed? ... ..	538
Sleep in same room as parents? ... ..	5,635
Sleep in same bed as parents? ... ..	590
Brothers and sisters sleeping together? ...	578
Sleep in the living-room? ... ..	2,608
Sleep in a cellar or underground room? ...	99

#### Food (enquiry includes 11,604 children).

Food

Adequately supplied with food? ... ..	8,042
Inadequately supplied with food? ... ..	2,433
In good health? ... ..	8,410
In moderate health? ... ..	2,231
In bad health? ... ..	963

The enquiry into the health and food of the children was made by the medical officers, some of whom append interesting remarks to their returns; *e.g.*:

One deduces a typical bill of fare for a week as follows:

"Sunday: Soup, and Soup meat.

Monday: Cold Soup meat.

Tuesday and Wednesday: Potatoes and bacon.

Thursday: Pork.

Friday: Fish (Stock fish, herring, cod).

Saturday: Tripe, kidneys, etc.

The use of milk is generally very limited.

Beer is considered more strengthening than milk.

Black bread is very seldom used.

Horseflesh is pretty generally used, and pork very commonly.

Instead of butter, treacle is often used.

A few children have eggs for breakfast, but such cases are very rare."

Another explains the principle on which he has made his returns, viz., "Every child who does not eat meat or eggs four times a week is classed as 'insufficiently fed.' Those who get meat only once a week, and who hardly ever drink beer, are *absolutely* insufficiently nourished."

In a separate table, some details are given of the distribution of soup at the schools. This first began in 1888, and continued through the winter months, from November till March 1st.

The first year the soup was that usually made by the Co-operative Society; the second year soup was made specially for the purpose, and twice a week stew was substituted. From the year 1892, every child received in addition a big slice of white bread. In 1888, 110,661 portions of soup were distributed, at a cost of 4,059 fcs. 40 cents. In 1894, 253,090 children received soup, and the cost was 13,093 fcs. 96 cents. It is expressly forbidden either to deprive children of this soup as a punishment, or to give it as a reward.

Typical bill  
of fare.

Distribution  
of soup.

## APPENDIX A.

Translated by Miss A. Hill.

Construction of School Buildings.—Rules adopted by the Home and Education Department in 1882. (Modifications of the General Rules dated November 27th, 1874.)

The official regulations of November 27th, 1874, for the construction and fittings of Elementary School buildings are still in force.

Certain modifications are, however, required by the progress in School hygiene; these have been made, and are hereby enforced, with regard to the regulation that all plans must be submitted to the Central Authority for Elementary Schools.

Attention is called to the fact that all proposals for the enlargement, improvement, and construction of School premises, or the supply of School furniture, must be submitted to the Chief Sanitary Inspector, authorised by the Home and Education Department. Moreover, when the authorities consulted, that is to say, the School Inspector and the local Board of Works, do not approve of the choice of site proposed by the local administration, the above-named authority is to be consulted.

Finally, in mining districts, where there may be cause for anxiety as to the stability of the ground, an examination shall be made with minute care by the Surveyor of Mines, as a necessary preliminary to the ratification of the choice of any site for school buildings; permission to

All plans  
must be  
approved by  
central  
authority.

build shall only be granted where the result proves that there is no fear for the stability of the buildings.

The following are the modifications of the Rules of 1874, which are already in use:—

**Class rooms.** Article 1. Site.—No further remark is called for, beyond what has just been said concerning the inspection, by competent engineers, of the solidity of the ground in mining districts.

Article 3. Method of Building.—Class rooms on upper floors must be carried on iron joists, and vaulting with concrete filling. The staircases must be of incombustible materials, either iron or stone. Each flight must have a maximum height of  $6\frac{1}{2}$  in., and a minimum depth of 1 ft. The flights must be at right angles to each other, intersected by landings of at least five feet in depth.

The flooring of class rooms, cloak rooms, and covered yards shall be of tiles, which are much stronger than concrete, and can be obtained at a moderate cost (6 fcs. to 6 fcs. 50 cents the square metre). In parts of the country where oak abounds, the use of it is recommended for the flooring of the schoolrooms, as being economical, and in accordance with old local custom.

**Lighting.** Articles 4, 5, 6. Internal Arrangements. Dimensions of rooms. Lighting.—A maximum area of 23 feet by 26 feet or 30 feet is recommended for class rooms, together with unilateral lighting, now acknowledged to be the best, as it avoids cross-light, and allows the desks to be arranged so that the scholars should only receive light from the left side.

But the light should penetrate to the farthest end of the room, and be as equally diffused as possible. To ensure this the following regulations must be observed:—

The windows should be pierced in one of the longer sides of the room at an angle; the size of the piers between two bays should not exceed a maximum of from 1 ft. 6 in. to 2 ft. 6 in. The lintels must be horizontal, as near as possible to the ceiling (10 in. to 12 in.), the sills being from 3 ft. 3 in. to 4 ft. from the floor. The height of the class rooms must be 14 ft., and the ceiling should be flat.

In the above Rules for the arrangement of the windows, it is insisted that one should adhere strictly to the relation between the glass surface and the contents of the class rooms, the existence of this relation not being sufficiently demonstrated.

School buildings with unilateral lighting should face the west, or be so placed that the light is still, the east; where the lighting is bilateral, the windows should be placed on the east and west.

**Size of classes.** It follows from the dimensions given above, that the maximum number of scholars should be reduced from 70 to 56, or 63, in order to carry out the regulations of 1874, which rightly insist on a minimum floor space of 10 square feet per child.

The doors of the class rooms should not open directly on to the street, ground or the public road. The entrance should be through cloak room passages, or covered yards.

**Cloak rooms.** The cloak rooms should run the full depth of the building, so as to be thoroughly lighted and ventilated by a window at the end, and should be provided with open framed partitions.

**Ventilation.** Article 7. Ventilation and Heating.—The casements of the windows should open widely below, and the part above the transom should be made to swing.

The ventilation of the class rooms should be on the following lines, which provides ventilation without back draught. Fresh air should be admitted through apertures of 10 in. to 12 in. in diameter, fitted with



circular gratings placed 5ft. to 5ft. 6in. from the floor, so as to avoid a current of air blowing directly either on scholars or teachers. The escape of impure air should also be through circular gratings, fitted as before, so that it shall be possible to regulate the draught. Each class room should be provided with four of these gratings, which should be about 1ft. 6in. in diameter, and should be placed in the corners of the ceiling. They should communicate with a vertical ventilating shaft of adequate size, opening above the roof.

Ventilators for the escape of vitiated air may also be placed close to the ceiling, in this case they should communicate with a special ventilating shaft, encircling, if possible, the flue of the stove, and with a separate opening, above the roof. This plan is especially suitable where class rooms are built one above the other, in a building with several stories.

Article 8. Playgrounds.—In the country where playgrounds are close to fields, they need not necessarily be enclosed by walls; these may be replaced by a quickset hedge, for the sake of economy.

Where several playgrounds are attached to one school, they may be separated in the same way, or by the erection of a single fence.

In large cities, bath rooms have been added to many schools. The Department, recognising the excellent results which may be expected from a hygienic point of view, and with regard to the health of the children of the poor in particular (to whom cleanliness is often unknown) has approved of their introduction, and has met the expense necessarily incurred by a Government grant.

## APPENDIX B.

### HEALTH OF TEACHERS.

#### (1.) NORMAL COLLEGES.

With regard to the Normal Colleges, the last report speaks of a general effort to secure good conditions for the physical development of the teachers.

Health of teachers in training colleges.

The food is reported to be abundant, wholesome and varied.

The dormitories and refectories are well ventilated and are thoroughly aired whenever they are unoccupied.

The students are required to hold themselves properly during the hours of study; while during the hours of recreation every effort is made to vary the games so as to cultivate skill and agility.

Two or three times a week walks of at least two hours are enforced; and by a very wise provision every now and then some little festivity is arranged with a view "to promote the good spirits which are so essential to health."

Gymnastics are most carefully cultivated, both by theoretical and practical teaching, and the colleges are generally admirably supplied with apparatus.

Regret is, however, expressed that while Hygiene is taught in all colleges, in the Female Training Colleges especially, the lessons are not sufficiently based on scientific principles, but are treated too much as a code of laws, or a set of formulæ, rather than as the result of facts and experience from which general laws can be deduced.

Teaching of Hygiene.

## (2.) ILLNESS OF TEACHERS IN PRIMARY SCHOOLS.

Illness of teachers.

In case of illness, the regulations seem somewhat severe.

If any member of the staff is indisposed, the Head Teacher must at once forward a printed notice to the medical officer of the district, asking him to visit the invalid at home. The hour at which this notice is sent must be accurately stated. If the Head Teacher has reason to think the indisposition will only necessitate one day's absence, the doctor need not be informed. Any teacher who is sent home must not leave the house until after the doctor's visit, unless sufficiently recovered to return to school, in which case the doctor must at once be informed.

If the doctor gives a medical certificate of illness, the sick person must forward it at once to the Sanitary oBard. If the letter be insufficiently stamped it will be refused, and the sick person will be considered to be absent irregularly. A duplicate certificate must also be sent to the Head of the School.

In case of recovery before the expiration of the time for which leave of absence has been granted, the invalid is expected to resume work at once. The medical officers may only grant leave of absence when the sick person is actually incapable of doing work. A record of absences on account of illness is kept, and will be taken into account in considering promotion, or increase of salary. Any teachers suffering from an illness or accident likely to incapacitate them for more than six months are placed on the unemployed list.

## APPENDIX C.

## HEALTH OF CHILDREN.

## (1.) DOCTOR'S VISITS.

Medical visits to schools.

Every place of Public Instruction in the City of Brussels, belonging to, or recognised by, the Commune, from the *Athénées*, through every grade down to the *Crèches*, is visited at least once every ten days by one of the sixteen doctors appointed for this purpose.

They have to report on the general condition and cleanliness of the class rooms; the state of the fittings; the lighting, heating and ventilation; the maximum, minimum and mean temperature, recorded by the teachers six times daily; and the condition of the playground, cloak-rooms, gymnasium, lavatories, etc. They have also to report the subjects which have been dealt with in the short conversational lessons on personal hygiene, which the teachers are instructed to give; the children write short compositions on these, which are sent to the Education Department, where they are inspected and returned to the Head Teacher who gives them back to the children to take home, in the hope that parents may also benefit. The doctors also make a monthly return of the number of (a) cases of slight indisposition or accidents treated by the Head Teacher; (b) of skin diseases, or other infectious disorders involving temporary absence from school; and (c) of fever or other serious illness, requiring prolonged attendance in the child's own home.

If any case of infectious disorder occurs, the doctor furnishes the Head Teacher with a certificate of the case, and the child is not allowed to return to school till the doctor gives a certificate of recovery. In



case of any illness of an infectious nature in the family, or house where a child lives, a similar certificate is given by the doctor, empowering the Head Teacher to forbid attendance at school till a clean bill of health can be produced.

All head teachers are taught how to give first aid in slight accidents, and to assist them in detecting any infectious illness a small pamphlet is given them setting forth the first symptoms which indicate possible danger, and these being noted, they must at once communicate with the visiting doctor. First aid.

## (2.) VACCINATION.

No child can be admitted to any school without a certificate of vaccination; and any person, on demand, can be vaccinated or re-vaccinated gratis at certain times and places. Vaccination.

## (3.) MEDICAL EXAMINATION OF CHILDREN.

Every child admitted to a primary school is medically examined, and the following points are recorded:—Name of child, nationality of parents, language spoken, place and date of birth. Further: age at time of admission, height, weight, circumference and diameter of head, circumference and diameter of chest, lung capacity, strength of traction, colour of hair and eyes. Any natural or accidental infirmity is chronicled, state of eyes and teeth, dental operations performed at the school, re-vaccination, with or without success; number of pustules. Any medicine which is ordered is noted, the date it is begun, and the date it ceases, with the results obtained. This examination is repeated annually, so as to keep a record of each child's physical development. Medical examination of children.

## (4.) CLEANLINESS.

Great attention is paid to this point. In the kindergarten when the children arrive they are carefully passed in review. Every child must be clean, with smooth hair, and clean under linen twice a week is rigorously enforced. (This is surely a "counsel of perfection.") The teacher must see that every child has a pocket-handkerchief; if any children are found to be dirty they must be handed over to the *femme de peine* to be washed. Before leaving school they are again inspected, and are always to be sent home perfectly clean, with their clothes in proper order. If children are sent dirty the head teacher admonishes the parents, and if after several warnings no improvement takes place, she may ask the educational authority of the town to send a remonstrance to the parents; if that takes no effect, the child is forbidden to attend school. In the older schools cleanliness and neatness are to be insisted on; unsuitable (*banale*) methods of wearing the hair, or those likely to spread any infectious disease, are forbidden. The teacher of a class must report to the head teacher any children who are habitually dirty or untidy, and he or she will communicate with the parents. In cases of excessive uncleanness the head teacher may send a child home. Bad marks are given for uncleanness. Cleanliness.

In the summer some of the children are allowed to bathe in the swimming bath, but never before May. The head teachers choose those children who they think will be most likely to benefit by swimming lessons. Any children who seem easily tired are named by their class teacher to the head, who consults the doctor about them. The



children are not to enter the bath until the heat and quickening of the heart's action caused by walking to the bath have subsided.

The children are not allowed to leave school during a severe thunder-storm or very heavy rain.

#### (5.) PHYSICAL EXERCISE.

##### Exercise.

Great attention is paid to gymnastics. In the training colleges the instruction is very thorough and scientific, and the last Government Report urges on inspectors the importance of insisting on sufficient attention being paid to it in the schools. Games encouraging active movement are to be encouraged in the playground, and the teachers should take part in them; in bad weather physical exercise calculated to exercise all parts of the body should be practised. At the beginning of the school year the teaching staff should find out if any child has ever fractured a limb; such children shall be shown to the doctor at his next visit, and any precautions recommended by him shall be scrupulously observed.

Every fortnight one afternoon should be devoted to a walk, in the interests of health and wholesome recreation; this is independent of the walks and excursions arranged for educational purposes. The teachers should take the children out into the country, or to a suitable place where games can be played. For each of these walks a programme must be prepared by the teacher, including the various games which the children habitually play, having regard to their age and sex. Whether in the town or the country, the children must walk two and two, and in good time; a listless manner of walking is not to be allowed.

If the school is at a great distance from places suitable for out-of-door games, a whole day out once a month may take the place of the fortnightly afternoon walks, in which case the children will take food with them.

#### (6.) POSTURE IN SCHOOL.

##### Posture in school.

When the children are listening to a lesson they should be taught to sit upright, with head erect, shoulders down, the back resting against the back of the desk, the hands either resting on the hips, crossed behind, hanging straight down, or resting on the desk. These positions should be adopted in turn, so as to avoid fatigue. The feet should rest on the ground, or on the stool of the desk, heels together, toes outward. Crossing of arms in front during lessons is strictly forbidden. As far as possible, desks should be provided suitable to the height of the children. Any child weak in sight or hearing should be placed in the front row.

After every lesson, some physical exercise should be practised, moving arms, legs, head, and body, especially movements of the head and bending the body backwards.

#### (7.) TEMPERANCE WORK.

##### Temperance

The excessive use of spirits, especially of gin, seems to be as great a curse in Belgium as in England; and of late years a regular crusade against it has been initiated, and is strongly supported by the Government. In 1892 a Ministerial circular was addressed to the directors of all training colleges, urging them to bring before their students the question of temperance, in lectures given from time to time by the staff of the college, treating the question both from

the scientific and practical point of view, and urging them to start temperance societies among the boys attending the practising school. The students in the female training colleges should especially have impressed on them the part which women can play in temperance work. The teachers should be urged to work on the intelligence, heart, and will of their pupils, and to make them realise their duty, first to their brothers, and later to their husbands and sons, by asserting all their influence against drunkenness.

As long ago as 1891, the Conseil de Perfectionnement urged the Government to encourage temperance societies in the primary schools, to consist of boys not less than eleven years of age, who should, after a long period of teaching and preparation, publicly, in the presence of their schoolfellows, promise to abstain from all spirits and to make very sparing use of wine and beer till they are twenty, and should then sign a pledge to the same effect. Every commune was encouraged to include a small sum in its yearly budget to assist these societies, the money to be devoted to the supply of suitable literature and purposes of propaganda. The teachers were exhorted constantly to refer to the evils—moral, physical, and social—of drunkenness; in some cases the members of a school temperance society pay a small subscription, out of which little festivities and excursions for the members are arranged.

The different district inspectors send very varying reports on the success of the work in their districts; some report the great difficulty felt by the head teachers because so large a proportion of parents are engaged in the drink traffic: "How will M. le Bourgmestre, who is a wholesale dealer in gin, regard the school temperance society? or M. le Echevin X., who retails it? or M. M. les Conseillers Y. and Z., who are excellent customers to M. X?"

However, on the whole, the work progresses. In the last published report, 1,114 school temperance societies existed, containing 77,608 members between the ages of eleven and twenty; and a very large proportion of communes give pecuniary help, realising the important bearing of the work on the national health.

JESSIE DOUGLAS MONTGOMERY

January, 1898.

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